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94th Congress
2d Session

COMMITTEE PRINT

# MIDDLE DISTILLATE DECONTROL

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HENRY M. JACKSON, Chairman

COMMITTEE ON INTERIOR AND
INSULAR AFFAIRS
UNITED STATES SENATE

PURSUANT TO

S. Res. 45

A NATIONAL FUELS AND ENERGY
POLICY STUDY

**Serial No. 94–35 (92–125)**

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# National Fuels and Energy Policy Study

(SENATE RESOLUTION 45, 92D CONGRESS)

This publication is printed for the use of Senators participating in the National Fuels and Energy Policy Study, authorized by Senate Resolution 45 of the 92d Congress.

Senate Resolution 45, introduced by Senators Jennings Randolph and Henry M. Jackson, was amended and agreed to by the Senate on May 3, 1971. The resolution authorized the Senate Committee on Interior and Insular Affairs and ex-officio members of the Committees on Commerce and Public Works and the Joint Committee on Atomic Energy to make a comprehensive study of programs and policies required to meet national energy needs.

Subsequently, the Senate approved the addition of ex-officio members from the Committees on Aeronautical and Space Sciences, on Finance, on Foreign Relations, on Government Operations, and on Labor and Public Welfare.

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## MEMORANDUM OF THE CHAIRMAN

*To Members and ex-officio members of the National Fuels and Energy Policy Study (S. Res. 45. 92d Cong.), Committee on Interior and Insular Affairs:*

Mandatory price and allocation regulations governing sales of crude oil, residual fuel oil and refined petroleum products have been in existence since the enactment, during the Arab embargo, of the Emergency Petroleum Allocation Act of 1973. Congress has repeatedly determined that the continued existence of features of these price and allocation regulations is desirable and essential to protect both consumers and independent segments of the petroleum industry from dislocations caused by the arbitrary, precipitous increases in world oil prices which have been imposed by the Organization of Petroleum Exporting Countries cartel. The Energy Policy and Conservation Act (Public Law 94–163) which the President signed on December 22, 1975, establishes a policy and a procedure for executive branch proposals for the modification of the price and allocation regulations. The conference committee which reported the EPCA recognized that a procedure to modify the regulation would be necessary to take account of changing circumstances in the domestic petroleum supply and demand situation since the 1973–74 "crisis" period.

The procedures adopted in sections 455 and 551 of EPCA involve the submission to the Congress by the President of a proposed "energy action" modifying the regulation as the President finds necessary. Each action is to be accompanied by detailed backup information outlining the issues and presenting the findings of the Administration with respect to these issues. The modification of the regulation would take effect unless disapproved by one House of Congress within 15 legislative days.

On June 15, 1976, the President proposed the removal of all price and allocation controls from home heating oil, diesel fuel and other middle distillate refined petroleum products. These proposals, energy actions No. 3 and 4, will become effective on midnight, June 30, 1976, unless a majority of either House adopts a resolution of disapproval.

Middle distillate price increases and supply dislocations have a substantial impact on homeowners and small businesses relying on oil for heating and on anyone who depends on commodities delivered by truck or diesel-powered railroad. Therefore, to assist in analyzing the administration's justification for removal of controls on these vital petroleum products, I have asked the staff of the Senate Interior Committee to assemble the key technical documents relating to these proposals and to reprint them for the use and information of Members of the Senate.

HENRY M. JACKSON, *Chairman.*

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# SECTION 455 OF THE ENERGY POLICY AND CONSERVATION ACT (PUBLIC LAW 94-163)

CONVERSION TO STANDBY AUTHORITIES

SEC. 455. The Emergency Petroleum Allocation Act of 1973, as amended by this Act, is further amended by adding at the end thereof the following new section:

"CONVERSION MECHANISM TO STANDBY AUTHORITIES

"SEC. 12. (a) The President may not amend the regulation under section 4(a) in any manner which— 15 USC 760a.

"(1) exempts crude oil produced in the United States from any provision of such regulation required to be made a part of such regulation by section 8; or Ante, p. 942.

"(2) results in making such regulation, as so amended, inconsistent with any limitation or other requirement specified in section 8.

"(b) Except as provided in subsection (a), the President may amend the regulation under section 4(a) if he determines that such amendment is consistent with the attainment, to the maximum extent practicable, of the objectives specified in section 4(b)(1) and that the regulation, as amended, provides for the attainment, to the maximum extent practicable, of such objectives.

"(c)(1) Any such amendment which, with respect to a class of persons or class of transactions (including transactions with respect to any market level), exempts crude oil, residual fuel oil, or any refined petroleum product or refined product category from the provisions of the regulation under section 4(a) as such provisions pertain to either (A) the allocation of amounts of any such oil or product, or (B) the specification of price or the manner for determining the price of any such oil or product, or both of the matters described in subparagraphs (A) and (B), may take effect only pursuant to the provisions of this subsection. 15 USC 753.

"(2) The President shall submit any amendment referred to in paragraph (1) to the Congress in accordance with the procedures specified in section 551 of the Energy Policy and Conservation Act. Any such amendment shall be accompanied by a specific statement of the President's rationale for such amendment and the matter described in subsection (d) of this section. Such an amendment— Post, p. 965.

"(A) may apply only to one oil or one refined product category;

"(B) may apply to the matters specified in either subparagraph (A) or (B) of paragraph (1) of this subsection, or both; and

"(C) may provide for scheduled or phased implementation.

"(3) As used in this section the term 'refined product category' means— "Refined product category."

"(A) motor gasoline;

"(B) Number 2 oils (Number 2 heating oil and Number 2-D diesel fuel);

"(C) propane; or

"(D) all or any portion of other refined petroleum products as a class (including natural gas liquids and natural gas liquid products, other than propane).

"(4) Such an amendment shall not take effect if either House of Congress disapproves such amendment in accordance with the procedures specified in section 551 of the Energy Policy and Conservation Act.

"(d)(1) The President shall support any amendment described in subsection (b) which is transmitted to the Congress under subsection (c) of this section with a finding that such amendment is consistent with the attainment of the objectives specified in subsection 4(b)(1) and in the case of—

"(A) any exemption described in subsection (c)(1)(A), with a finding that such oil or refined product category is no longer in short supply and that exempting such oil or refined product category will not have an adverse impact on the supply of any other oil or refined petroleum product subject to this Act; and

"(B) any exemption described in subsection (c)(1)(B), with a finding that competition and market forces are adequate to protect consumers and that exempting such oil or refined product category will not result in inequitable prices for any class of users of such oil or product.

"(2) Any amendment which the President submits to the Congress under subsection (c) of this section shall be accompanied—

"(A) by a statement of the President's views as to the potential economic impacts (if any) of such amendment which, where practicable, shall include his views as to—

"(i) the State and regional impacts of such amendment (including effects on governmental units);

"(ii) the effects of such amendment on the availability of consumer goods and services; the gross national product; competition; small business; and the supply and availability of energy resources for use as fuel or as feedstock for industry; and

"(iii) the effects on employment and consumer prices; and

"(B) in the case of an exemption described in subsection (c)(1)(B) of this section, by an analysis of the effects of such amendment on the rate of unemployment for the United States, the Consumer Price Index for the United States, and the implicit price deflator for the gross national product.

"(e) In any judicial review of an amendment required by this section to be submitted to Congress in accordance with the procedures specified in section 551 of the Energy Policy and Conservation Act, the reviewing court may not hold unlawful or set aside any such amendment on the ground that any findings made by the President were not adequate to meet the requirements of subsection (c), (d), or (g) of this section or subparagraph (A), (E), or (F), of section 706(2) of title 5, United States Code.

Post, p. 965.

"(f) With respect to any oil or refined product category which is exempted pursuant to the provisions of this section, the President shall have authority at any time thereafter to prescribe a regulation or issue an order respecting either the allocation of amounts, or the specification of price or the manner for determining the price, of any such oil or refined product category upon a determination by him that such regulation or order is necessary to attain, and is consistent with, the objectives specified in section 4(b)(1). Any such oil or refined product category for which allocation or price requirements are reimposed under authority of this subsection may subsequently be exempted without regard to the provisions of subsection (c) of this section.

15 USC 753.

Ante, p. 948.

"(g) Notwithstanding the provisions of subsection (e) of section 4, the President may, if he determines that the exemption from payments for certain small refiners required by such subsection—

"(1) results in unfair economic or competitive advantage with respect to other small refiners; or

"(2) otherwise has the effect of seriously impairing the President's ability to provide in the regulation under section 4(a) for the attainment of the objective specified in section 4(b)(1)(D) and for the attainment of those other objectives specified in section 4(b)(1);

submit, in accordance with the procedures specified in section 551 of the Energy Policy and Conservation Act, an amendment to modify the regulation under section 4(a) with respect to the provisions of such regulation as they relate to such exemption. Such amendment shall not take effect if disapproved by either House of Congress under the procedures specified in such section 551.".

# SECTION 551 OF THE ENERGY POLICY AND CONSERVATION ACT (PUBLIC LAW 94-163)

PROCEDURE FOR CONGRESSIONAL REVIEW OF PRESIDENTIAL REQUESTS TO IMPLEMENT CERTAIN AUTHORITIES

SEC. 551. (a) For purposes of this section, the term "energy action" means any matter required to be transmitted, or submitted to the Congress in accordance with the procedures of this section. 42 USC 6421. "Energy action."

(b) The President shall transmit any energy action (bearing an identification number) to both Houses of Congress on the same day. If both Houses are not in session on the day any energy action is received by the appropriate officers of each House, for purposes of this section such energy action shall be deemed to have been transmitted on the first succeeding day on which both Houses are in session. Transmittal to Congress.

(c)(1) Except as provided in paragraph (2) of this subsection, if energy action is transmitted to the Houses of Congress, such action shall take effect at the end of the first period of 15 calendar days of continuous session of Congress after the date on which such action is transmitted to such Houses, unless between the date of transmittal and the end of such 15-day period, either House passes a resolution stating in substance that such House does not favor such action.

(2) An energy action described in paragraph (1) may take effect prior to the expiration of the 15-calendar-day period after the date on which such action is transmitted, if each House of Congress approves a resolution affirmatively stating in substance that such House does not object to such action.

(d) For the purpose of subsection (c) of this section—

(1) continuity of session is broken only by an adjournment of Congress sine die; and

(2) the days on which either House is not in session because of an adjournment of more than 3 days to a day certain are excluded in the computation of the 15-calendar-day period.

(e) Under provisions contained in an energy action, a provision of such an action may take effect on a date later than the date on which such action otherwise takes effect pursuant to the provisions of this section.

(f)(1) This subsection is enacted by Congress—

(A) as an exercise of the rulemaking power of the Senate and the House of Representatives, respectively, and as such it is deemed a part of the rules of each House, respectively, but applicable only with respect to the procedure to be followed in that House in the case of resolutions described by paragraph (2) of this subsection; and it supersedes other rules only to the extent that it is inconsistent therewith; and

(B) with full recognition of the constitutional right of either House to change the rules (so far as relating to the procedure of that House) at any time, in the same manner and to the same extent as in the case of any other rule of the House.

(2) For purposes of this subsection, the term "resolution" means only a resolution of either House of Congress described in subparagraph (A) or (B) of this paragraph. "Resolution."

(A) A resolution the matter after the resolving clause of which is as follows: "That the _____ does not object to the energy action numbered _____ submitted to the Congress on _____, 19__.", the first blank space therein being filled with the name of the resolving House and the other blank spaces being appropriately filled; but does not include a resolution which specifies more than one energy action.

(B) A resolution the matter after the resolving clause of which is as follows: "That the _____ does not favor the energy action numbered _____ transmitted to Congress on _____ _____, 19__.", the first blank space therein being filled with the name of the resolving House and the other blank spaces therein being appropriately filled; but does not include a resolution which specifies more than one energy action.

(3) A resolution once introduced with respect to an energy action shall immediately be referred to a committee (and all resolutions with respect to the same plan shall be referred to the same committee) by the President of the Senate or the Speaker of the House of Representatives, as the case may be.

(4) (A) If the committee to which a resolution with respect to an energy action has been referred has not reported it at the end of 5 calendar days after its referral, it shall be in order to move either to discharge the committee from further consideration of such resolution or to discharge the committee from further consideration of any other resolution with respect to such energy action which has been referred to the committee.

(B) A motion to discharge may be made only by an individual favoring the resolution, shall be highly privileged (except that it may not be made after the committee has reported a resolution with respect to the same energy action), and debate thereon shall be limited to not more than one hour, to be divided equally between those favoring and those opposing the resolution. An amendment to the motion shall not be in order, and it shall not be in order to move to reconsider the vote by which the motion was agreed to or disagreed to.

(C) If the motion to discharge is agreed to or disagreed to, the motion may not be renewed, nor may another motion to discharge the committee be made with respect to any other resolution with respect to the same energy action.

(5) (A) When the committee has reported, or has been discharged from further consideration of, a resolution, it shall be at any time thereafter in order (even though a previous motion to the same effect has been disagreed to) to move to proceed to the consideration of the resolution. The motion shall be highly privileged and shall not be debatable. An amendment to the motion shall not be in order, and it shall not be in order to move to reconsider the vote by which the motion was agreed to or disagreed to.

(B) Debate on the resolution referred to in subparagraph (A) of this paragraph shall be limited to not more than 10 hours, which shall be divided equally between those favoring and those opposing such resolution. A motion further to limit debate shall not be debatable. An amendment to, or motion to recommit, the resolution shall not be in order, and it shall not be in order to move to reconsider the vote by which such resolution was agreed to or disagreed to; except that it shall be in order—

(i) to offer an amendment in the nature of a substitute, consisting of the text of a resolution described in paragraph (2) (A) of this subsection with respect to an energy action, for a resolution described in paragraph (2) (B) of this subsection with respect to the same such action, or

(ii) to offer an amendment in the nature of a substitute, consisting of the text of a resolution described in paragraph (2) (B) of this subsection with respect to an energy action, for a resolution described in paragraph (2) (A) of this subsection with respect to the same such action.

The amendments described in clauses (i) and (ii) of this subparagraph shall not be amendable.

(6) (A) Motions to postpone, made with respect to the discharge from committee, or the consideration of a resolution and motions to proceed to the consideration of other business, shall be decided without debate.

(B) Appeals from the decision of the Chair relating to the application of the rules of the Senate or the House of Representatives, as the case may be, to the procedure relating to a resolution shall be decided without debate.

(7) Notwithstanding any of the provisions of this subsection, if a House has approved a resolution with respect to an energy action, then it shall not be in order to consider in that House any other resolution with respect to the same such action.

**TRANSMITTAL RELATING TO ENERGY ACTION NUMBERED 3, JUNE 15, 1976**

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

OFFICE OF THE ADMINISTRATOR

June 15, 1976

Honorable Nelson A. Rockefeller
President of the Senate
Washington, D.C. 20510

Re: Exemption of No. 2 Heating Oil and No. 2-D Diesel Fuel from the Mandatory Petroleum Allocation and Price Regulations (Energy Action No. 3)

Dear Mr. President:

On April 21, 1976, the Federal Energy Administration gave notice of a proposal to exempt No. 2 heating oil, No. 2-D diesel fuel and other middle distillates from the Mandatory Petroleum Allocation and Price Regulations and to revoke Part 215 (Low Sulphur Petroleum Products Regulation). Written comments from interested persons were invited through May 11, 1976, and a public hearing regarding the proposal was held on May 12 and 13, 1976.

FEA has now completed its consideration of all the information available in this proceeding and has determined that the proposal to exempt middle distillates should be adopted and that Part 215 should be revoked. As required by section 455 of the Energy Policy and Conservation Act, Pub. L. 94-163 (EPCA), which added section 12 to the Emergency Petroleum Allocation Act of 1973, as amended (EPAA), each amendment exempting a refined product category from regulation must be submitted separately to each House of the Congress for review pursuant to section 551 of the EPCA.

FEA is, therefore, herewith submitting the amendment revoking Part 215 and exempting No. 2 heating oil and No. 2-D diesel fuel, which are defined in the EPCA as a single refined product category, to the Senate, and is also concurrently submitting the amendment to the House of Representatives for Congressional review. By Energy Action No. 4, FEA is separately submitting to each House of Congress an amendment exempting

the other middle distillates (No. 1 heating oil, No. 1-D diesel fuel and kerosene), which are defined in the EPCA as another refined product category, for review pursuant to section 551 of the EPCA.

The findings and views supporting this amendment, which are required by section 455 of the EPCA, are set forth in the enclosed document entitled "Findings and Views Concerning the Exemption of Middle Distillates from the Mandatory Petroleum Allocation and Price Regulations".

The Administrator of the Federal Energy Administration has been delegated by the President all the authority granted to him by the EPAA (E.O. 11790, 39 F.R. 23185, June 27, 1974).

Unless disapproved by the Congress as provided by section 551 of the EPCA, the enclosed amendment will be effective July 1, 1976 or on the first day following expiration of the review period provided for by Section 551 of the EPCA, whichever is later.

Sincerely,

John A. Hill
Acting Administrator

Enclosures

OFFICIAL COMMUNICATION
RECEIVED IN THE OFFICE OF
THE PRESIDENT OF THE SENATE
DATE RECEIVED JUN 15 1976
TIME RECEIVED 5:00
DATE DELIVERED JUN 15 1976

TITLE 10 - ENERGY

CHAPTER II - FEDERAL ENERGY ADMINISTRATION

PART 210 - GENERAL ALLOCATION AND PRICE RULES
PART 211 - MANDATORY PETROLEUM ALLOCATION REGULATIONS
PART 212 - MANDATORY PETROLEUM PRICE REGULATIONS
PART 215 - LOW SULFUR PETROLEUM PRODUCTS REGULATION

Exemption of No. 2 Heating Oil and No. 2-D Diesel Fuel from the Mandatory Petroleum Allocation and Price Regulations

## Introduction

On April 21, 1976, the Federal Energy Administration issued a notice of proposed rulemaking and public hearing (41 FR 17512, April 26, 1976) to amend 10 CFR Parts 210, 211 and 212 to exempt middle distillate, including No. 2 heating oil and No. 2-D diesel fuel, from the Mandatory Petroleum Price and Allocation Regulations and to revoke 10 CFR Part 215 which regulates the use of low sulfur petroleum products. The proposal was based on tentative conclusions set forth in a document dated April 21, 1976, entitled "Preliminary Findings and Views Concerning the Exemption of Middle Distillates from the Mandatory Petroleum Allocation and Price Regulations" ("Preliminary Findings"). Written comments on the exemption proposal and on the Preliminary Findings were invited through May 11, 1976, and the public hearing was held May 12 and May 13, 1976.

In the April 21 notice, FEA noted that its conclusion that market conditions might be appropriate for an end to price and allocation controls was shared by many members of

Congress who had urged FEA to commence the process of exempting products from regulation.

As an example, FEA specifically cited a letter to the Administrator of FEA dated November 4, 1975, from Senators Kennedy, Durkin, Stafford, Muskie, Pastore, McIntyre, Brooke, Pell and Ribicoff which stated:

> As supplies of fuel oil and other petroleum products have returned to normal levels, fuel dealers are reporting to us that the price and allocation controls may be preventing the free play of competitive forces and thereby raising consumer prices. . . .
>
> Since there is conflicting and complex evidence on this issue, we believe it is the best interest of all parties to air fully the options for action and the possible consequences of changing the allocation and price control system. We therefore feel that public hearings should be held by the Federal Energy Administration as provided by section 4(g)(2) of the Allocation Act of 1973 and the similar provision of S. 622-H.R. 7014, now in Conference. . . .
>
> As the hearing process is a lengthy one and must, of course, be followed by careful congressional review of the FEA's findings, the FEA should begin this process soon so that the Congress and the public will have full opportunity to consider this vital issue.
>
> We therefore strongly urge that you issue the public notice necessary to the commencement of public hearings on the removal of allocation and price controls from retailers and wholesalers of fuel oil and other petroleum products.

Section 12(c)(2) of the Emergency Petroleum Allocation Act of 1973 (EPAA) requires that an exemption amendment apply to only one oil or one refined product category, and specifies that No. 2 heating oil and No. 2-D diesel fuel constitute a single product category. FEA proposed the exemption of No. 2 heating oil, No. 2-D diesel fuel and other middle distillate

fuels in a single notice of proposed rulemaking and issued a single document containing its preliminary findings and views related to the exemption. However, as required by the EPAA, FEA has determined separately for the No. 2 oils and for the other middle distillate fuels that an exemption should be adopted, and is today submitting separate exemption amendments ("Energy Actions Nos. 3 and 4") for these product categories for Congressional review of FEA's findings and views supporting these exemptions. The exemption amendment contained in this document, to be submitted as Energy Action No. 3, relates to No. 2 heating oil and No. 2-D diesel fuel as a single product category ("No. 2 oils"). "No. 2 heating oil" means heating oil grade No. 2 as defined in American Society for Testing and Materials (ASTM) D396-71. "No. 2-D diesel fuel" means diesel fuel grade no. 2 as defined in American Society for Testing and Materials (ASTM) D975-71.

One hundred forty-seven written and oral comments were received in response to the notice of proposed exemption. Those offering comments included major integrated refining companies, small and independent refining companies, marketers, ultimate consumers, state governments and trade associations.

Almost all of the parties commenting agreed with FEA that No. 2 oils should be exempted from FEA's allocation and price regulations. This support was based generally upon agreement with FEA's conclusions as to supply and demand

projections, competition, and other findings and views set forth in the Preliminary Findings. Parties opposing the exemption of No. 2 oils generally based their opposition on the belief that the current surplus supply situation might not continue through the upcoming heating season, that spot shortages might occur, and that if such shortages were to occur, independent marketers and consumers of No. 2 oils would be without the protection of price and allocation controls and might be subject to inequitable prices or termination of supply.

FEA has carefully considered the comments of all persons who participated in the rulemaking. Following its consideration, FEA has concluded that its initial view that No. 2 oils should be exempted from regulations is correct.

No information or data were presented in this proceeding which significantly alter FEA's preliminary findings and views. FEA does not anticipate that supply shortages will occur in the future as predicted by some comments and in any event FEA has standby authority under section 12(f) of the Emergency Petroleum Allocation Act of 1973 (EPAA) to reimpose allocation and price controls (on a temporary or permanent basis) if necessary to attain the objectives set forth in section 4(b)(1) of the EPAA. Therefore, FEA hereby adopts the proposed amendments exempting No. 2 oils from the Mandatory Petroleum Allocation and Price Regulations. Unless disapproved by either House of Congress under section 551 of the Energy

Policy and Conservation Act (EPCA), this exemption will be effective either July 1, 1976 or the first day following the expiration of the 15 day period provided in section 551 for Congressional review, whichever is later.

Although FEA is adopting this exemption amendment based on its firm conclusion that a supply shortage respecting No. 2 oils will not occur in the forseeable future, FEA recognizes that unforseeable difficulties, unrelated to the exemption amendment adopted today and confined to particular market areas, could arise. In order to further ensure that any such possible supply problems following the removal of controls do not adversely affect independent marketers and their customers, FEA intends to propose shortly procedures pursuant to which firms experiencing supply problems may obtain supplies. FEA's proposed rulemaking in this regard will request comments on programs that operate in a manner similar to the state set-aside program currently in effect and in a manner similar to that by which supplier/purchaser assignments are currently effected.

Findings and Views

In addition to this amendment to exempt No. 2 oils from the Mandatory Petroleum Allocation and Price Regulations, FEA has prepared its findings and views supporting the amendment as required by section 12 of the EPAA based upon its consideration of the comments of those persons who

participated in the rulemaking and other information available to FEA. These findings and views are set forth in a document dated June 15, 1976 and entitled "Findings and Views Concerning the Exemption of Middle Distillates from the Mandatory Petroleum Allocation and Price Regulations" ("Findings and Views"). These findings and views may be summarized, in part, as follows:

(1) No. 2 oils are not in short supply.

-- Projected supplies of No. 2 oils, taking into account projected expansions of domestic refinery capacity, will be sufficient to meet demand over the near term (1976-1978).

(2) Exemption of No. 2 oils from the Mandatory Petroleum Allocation and Price Regulations will not have an adverse impact on the supply of any other oil or refined product subject to the EPAA.

(3) Competition and market forces are adequate to protect consumers, following an exemption of No. 2 oils from regulation. In fact a greater degree of competition would be expected after exemption than exists under current regulations.

-- No price increases are anticipated to result directly from decontrol.

-- The No. 2 oil market share of large, integrated refiners has been decreasing since 1972, while that of the large independent and small refiners has been increasing. However, continued controls could lead to a deterioration of competition, resulting in reduced economic efficiency and higher prices.

-- The exemption itself will have a positive effect on competition, in particular enhancing the competitive viability of small and independent refiners and marketers.

-- The exemption would permit purchasers (including consumers) to seek the lowest cost supplier by freely using competitive bids without regard to fixed supplier/purchaser relationships, thereby exerting downward pressure on existing market prices and providing incentives to enhance marketing services.

(4) Exemption of No. 2 oils from regulation will not result in inequitable prices for any class of No. 2 oil or other product user.

-- Aggregate prices for No. 2 oils will remain unchanged by the exemption itself. Prices can, however, be expected to rise over time as the result of increased domestic and foreign crude costs.

(5) Exemption of No. 2 oils from the price and allocation regulations is consistent with the attainment of the objectives set forth in section 4(b)(1) of the EPAA.

-- Since an adequate supply is anticipated, the continued allocation and pricing of No. 2 oils are not necessary to protect the public health, safety and welfare, and the national defense [Section 4(b)(1)(A)]; the maintenance of all public services [Section 4(b)(1)(B)]; the maintenance of agricultural operations [Section 4(b)(1)(C)]; or the maintenance of exploration for and production or extraction of fuels and minerals [Section 4(b)(1)(G)].

-- Adequate supply and the positive effects of increased competition insure that the exemption is consistent with the equitable distribution of crude oil, residual fuel oil and refined petroleum products [Section 4(b)(1)(F)] and that the exemption will have no adverse effect on the allocation of suitable crude

oil to U.S. refineries [Section 4(b)(1)(E)].

-- Because the regulations issued pursuant to the EPAA are designed to deal primarily with shortage conditions, the exemption is not only consistent with but, in the current period of ample supplies, should actually facilitate the attainment of the objectives of preservation of an economically sound petroleum industry [Section 4(b)(1)(D)]; economic efficiency [Section 4(b)(1)(H)]; and minimization of economic distortions, inflexibility, and interference with market mechanisms [Section 4(b)(1)(I)].

The Findings and Views also state FEA's views concerning the potential economic impacts of exempting No. 2 oils from the Mandatory Petroleum Allocation and Price Regulations. It is not anticipated that there will be any adverse state or regional impacts resulting from the proposed exemption. In fact, governmental units which use large quantities of No. 2 oils will find that exemption will permit them to use competitive bids more easily. In addition, FEA anticipates no adverse economic impacts on the availability of consumer goods or services, the gross national product, small business or the supply and availability of energy resources as fuel or feedstock for industry. FEA expects that the exemption

will have a positive effect on competition. The exemption is likewise expected not to cause an adverse effect on employment or consumer prices. FEA's analysis of the effects of the exemption on the rate of unemployment in the U.S., on the Consumer Price Index and on the implicit price deflator for the gross national product are set forth in detail in the Findings and Views.

Allocation of Increased Crude Oil Costs to No. 2 Oils

The refiners' cost allocation formulae of § 212.83(c) provide that the portion of a refiner's total increased costs of crude oil and increased non-product costs which are incurred in a month of measurement and which are attributable on a proportionate volumetric basis to the quantity of exempt products produced from crude oil must be excluded from the amount of increased costs which may be passed through in prices charged for covered (i.e., non-exempt) products. Increased costs incurred with respect to purchases of exempt products are excluded from the total of increased costs of purchased product permitted to be included in maximum allowable prices charged for covered products. These exclusions effectively prevent increased costs incurred beginning with the month prior to the effective date of the exemption of a product and attributable to that exempt product from being passed through in prices charged for non-exempt products. The notice of proposed rulemaking noted

the substantial amounts of unrecovered increased costs currently allocable to maximum allowable prices for middle distillates and the fact that these increased costs could be reallocated under current price rules to maximum allowable prices for gasoline prior to the effective date of the exemption of middle distillates. FEA therefore proposed to limit the reallocation of any increased costs attributable to No. 2 oils, effective as of the date of the April 21 notice. FEA requested comments on both the extent and the effective date of this proposed limitation in light of the seasonal pricing patterns for gasoline and certain middle distillates and any other historic pricing practices relevant to this issue.

Parties commenting on this issue generally opposed reducing refiners' banked costs. The great majority of this opposition was voiced by refiners which stated that: (1) the limitation would be inconsistent with the general feature of the price rules permitting more than a proportionate amount of increased costs to be recovered in gasoline prices; and (2) the limitation would penalize refiners by causing them to lose unrecovered costs. Although the refiner price rules do permit a disproportionate allocation of increased costs to gasoline prices, in no event do the price rules permit increased costs attributable to exempt products to be recovered in lawful prices charged for covered products; and while it is true that the limitation would prohibit the recovery of

these costs in gasoline prices, it does not follow that these costs are "lost". Such costs may be recovered without any restrictions whatsoever in prices charged for the exempt middle distillates to which they are properly attributable. Accordingly, the refiner price rules are amended to prohibit the reallocation of increased costs attributable to No. 2 oils, effective April 21, 1976. Other conforming amendments to the price regulations of Part 212 are also being adopted to reflect the exemption of No. 2 oils.

On April 28, 1976, FEA adopted reallocation of increased product costs provisions for resellers which granted them the same pricing flexibility previously restricted to refiners. The same reasons which have convinced FEA that the refiner price rules should be amended to prohibit the reallocation of banked costs attributable to No. 2 oils, effective April 21, 1976, are equally applicable to resellers. Therefore, conforming changes have been made to the reseller regulations in § 212.93(i)(2).

Authority Delegated to the Governor of Puerto Rico

On March 7, 1974 the Administrator of FEA (then FEO) delegated to the Governor of the Commonwealth of Puerto Rico all authority previously delegated to the Administrator of FEO by section 3(a) of Executive Order 11748 with respect to the allocation of several refined petroleum products, including middle distillate, within the Commonwealth of Puerto Rico. The March 7 delegation of authority, insofar as it applies

to No. 2 oils, will be revoked by separate order to reflect the exemption amendments adopted today.

Revocation of Part 215

The exemption amendments adopted today result in an end to the effectiveness of Part 215 of FEA's regulations, since middle distillates constitute the greatest part of the fuels that remain subject to Part 215. FEA is therefore revoking Part 215, the Low Sulfur Petroleum Products Regulation.

Effective Date and Standby Authority

Comments and testimony received with respect to the time necessary between the promulgation of the exemption amendment and its implementation generally supported FEA's tentative conclusion that July 1, 1976 is the most appropriate effective date for the exemption of No. 2 oils. In particular, the comments noted that an early effective date was necessary to facilitate the implementation of "summer fill" and other inventory maintenance programs historically utilized in the marketing of No. 2 oils.

Section 12(f) of the EPAA provides that following the exemption of any product from regulation, FEA shall have the authority at any time to reimpose price and allocation controls if necessary to attain the objectives of the EPAA. For this reason, FEA is adopting amendments which stay the effectiveness of Subpart G of Part 211 and of the general price regulations as they would otherwise apply to No. 2

oils without deleting those regulations from the Code of Federal Regulations. They are in effect converted to standby status, so that in the event of shortages or other occurrences which might require reimposition of controls, they may be quickly put into effect.

(Emergency Petroleum Allocation Act of 1973, Pub. L. 93-159, as amended by Public L. 94-163; Federal Energy Administration Act of 1974, Pub. L. 93-275; E.O. 11790 (39 FR 23185)).

In consideration of the foregoing, Parts 210, 211 and 212 of Chapter II, Title 10 of the Code of Federal Regulations, are amended and Part 215 is revoked as set forth below, effective July 1, 1976 or the first day following the expiration of the 15-day review period under section 551 of the EPCA, whichever is later, unless this amendment is disapproved by either House of Congress pursuant to the review procedures set forth in section 551 of the EPCA.

Issued in Washington, D.C., June 15, 1976.

Michael F. Butler
General Counsel

1. Section 210.35 of Part 211 is amended by the addition of a paragraph (b) to read as follows:

§ 210.35 Exempted products.

* * * *

(b) No. 2 heating oil and No. 2-D diesel fuel are exempt from the provisions of Part 211 and Part 212 of this chapter.

2. Section 211.1 is amended in paragraph (b) by the addition of a new subparagraph (5) to read as follows:

§ 211.1 Scope.

* * * *

(b) Exclusions.

* * * *

(5) Notwithstanding the provisions of Subpart G of this part, No. 2 heating oil and No. 2-D diesel fuel, as defined in § 212.31 of this chapter, are excluded from this part.

3. Section 212.31 is revised in the definition of "covered products" to read as follows:

§ 212.31 Definitions.

* * * *

"Covered products" means aviation fuels, benzene, butane, crude oil, gas oil, gasoline, greases, hexane, kerosene, lubricant base oil stocks, lubricants, naphthas, natural gas liquids, natural gasoline, No. 1 heating oil and No. 1-D diesel fuel, propane, special naphthas (solvents),

toluene, unfinished oils, xylene, and other finished products. A blend of two or more particular covered products is considered to be that particular covered product constituting the major proportion of the blend.

* * * *

4. Section 212.83 is revised in subparagraph (2) of paragraph (d), to read as follows:

§ 212.83 Price rule.

* * * *

(d) Realloaction of increased costs among product categories.

* * *

(2) No. 2 oils.

(i) To the extent that a refiner does not allocate its increased costs for No. 2 oils to maximum allowable prices for No. 2 oils, it may instead allocate that part of its increased costs for No. 2 oils only to maximum allowable prices for gasoline. No increased costs for No. 2 oils may be reallocated to maximum allowable prices for general refinery products or aviation jet fuel.

(ii) Beginning on April 21, 1976, no increased costs for No. 2 oils may be reallocated to maximum allowable prices for any other covered product.

5. Section 212.93 is amended in clause (ii) of subparagraph (2) of paragraph (i) to read as follows:

§ 212.93 Price rule.

* * *

(i) Reallocation of increased product costs among products.

* * *

(2) * * *

(ii) No. 2 oils.

(A) To the extent that a seller does not allocate its increased product costs for No. 2 oil to the prices for that product, it may reallocate the unallocated part of its increased product costs for that product to the prices for gasoline, in whatever amounts the seller deems appropriate. No increased product costs for No. 2 oils may be reallocated to the prices for any general refinery product or products, including propane, or for aviation jet fuel.

(B) Beginning on April 21, 1976, no increased costs for No. 2 oils may be reallocated to maximum allowable prices for any other covered product.

6. Part 215 is revoked.

# TRANSMITTAL RELATING TO ENERGY ACTION NUMBERED 4, JUNE 15, 1976

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

OFFICE OF THE ADMINISTRATOR

June 15, 1976

Honorable Nelson A. Rockefeller
President of the Senate
Washington, D.C. 20510

Re: Exemption of Middle Distillates (Other Than No. 2 Heating Oil and No. 2-D Diesel Fuel) from the Mandatory Petroleum Allocation and Price Regulations (Energy Action No. 4)

Dear Mr. President:

On April 21, 1976, the Federal Energy Administration gave notice of a proposal to exempt No. 1 heating oil, No. 1-D diesel fuel, kerosene and other middle distillates from the Mandatory Petroleum Allocation and Price Regulations and to revoke Part 215 (Low Sulphur Petroleum Products Regulation). Written comments from interested persons were invited through May 11, 1976, and a public hearing regarding the proposal was held on May 12 and 13, 1976.

FEA has now completed its consideration of all the information available in this proceeding and has determined that the proposal to exempt middle distillates should be adopted and that Part 215 should be revoked. As required by section 455 of the Energy Policy and Conservation Act, Pub. L. 94-163 (EPCA), which added section 12 to the Emergency Petroleum Allocation Act of 1973, as amended (EPAA), each amendment exempting a refined product category from regulation must be submitted separately to each House of the Congress for review pursuant to section 551 of the EPCA.

FEA is, therefore, herewith submitting the amendment revoking Part 215 and exempting No. 1 heating oil, No. 1-D diesel fuel and kerosene (which are defined in the EPCA as a single product category) to the Senate, and is concurrently submitting this amendment to the House of Representatives, for Congressional review. By Energy Action No. 3, FEA is separately submitting to each House of Congress an amendment exempting the other middle distillates (No. 2 heating oil and No. 2-D diesel fuel), which are defined in the EPCA as a separate refined product category, for review pursuant to section 551 of the EPCA.

The findings and views supporting this amendment, which are required by section 455 of the EPCA, are set forth in the enclosed document entitled "Findings and Views Concerning the Exemption of Middle Distillates from the Mandatory Petroleum Allocation and Price Regulations".

The Administrator of the Federal Energy Administration has been delegated by the President all the authority granted to him by the EPAA (E.O. 11790, 39 F.R. 23185, June 27, 1974).

Unless disapproved by the Congress as provided by section 551 of the EPCA, the enclosed amendment will be effective July 1, 1976 or on the first day following expiration of the review period provided for by Section 551 of the EPCA, whichever is later.

Sincerely,

John A. Hill
Acting Administrator

Enclosures

OFFICIAL COMMUNICATION
RECEIVED IN THE OFFICE OF
THE PRESIDENT OF THE SENATE
DATE RECEIVED JUN 15 1976
TIME RECEIVED 5:00 p.m.
DATE DELIVERED JUN 15 1976

TITLE 10 - ENERGY

CHAPTER II - FEDERAL ENERGY ADMINISTRATION

PART 210 - GENERAL ALLOCATION AND PRICE RULES
PART 211 - MANDATORY PETROLEUM ALLOCATION REGULATIONS
PART 212 - MANDATORY PETROLEUM PRICE REGULATIONS
PART 215 - LOW SULFUR PETROLEUM PRODUCTS REGULATION

Exemption of No. 1 Heating Oil, No. 1-D Diesel Fuel and Kerosene from the Mandatory Petroleum Allocation and Price Regulations

## Introduction

On April 21, 1976, the Federal Energy Administration issued a notice of proposed rulemaking and public hearing (41 FR 17512, April 26, 1976) to amend 10 CFR Parts 210, 211 and 212 to exempt middle distillate, including No. 1 heating oil, No.1-D diesel fuel and kerosene, from the Mandatory Petroleum Price and Allocation Regulations and to revoke 10 CFR Part 215 which regulates the use of low sulfur petroleum products. The proposal was based on tentative conclusions set forth in a document dated April 21, 1976, entitled "Preliminary Findings and Views Concerning the Exemption of Middle Distillates from the Mandatory Petroleum Allocation and Price Regulations" ("Preliminary Findings"). Written comments on the exemption proposal and on the Preliminary Findings were invited through May 11, 1976, and the public hearing was held May 12 and May 13, 1976.

In the April 21 notice, FEA noted that its conclusion that market conditions might be appropriate for an end to price and allocation controls was shared by many members of

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Congress who had urged FEA to commence the process of exempting products from regulation.

As an example, FEA specifically cited a letter to the Administrator of FEA dated November 4, 1975, from Senators Kennedy, Durkin, Stafford, Muskie, Pastore, McIntyre, Brooke, Pell and Ribicoff which stated:

> As supplies of fuel oil and other petroleum products have returned to normal levels, fuel dealers are reporting to us that the price and allocation controls may be preventing the free play of competitive forces and thereby raising consumer prices. . . .
>
> Since there is conflicting and complex evidence on this issue, we believe it is the best interest of all parties to air fully the options for action and the possible consequences of changing the allocation and price control system. We therefore feel that public hearings should be held by the Federal Energy Administration as provided by section 4(g)(2) of the Allocation Act of 1973 and the similar provision of S. 622-H.R. 7014, now in Conference. . . .
>
> As the hearing process is a lengthy one and must, of course, be followed by careful congressional review of the FEA's findings, the FEA should begin this process soon so that the Congress and the public will have full opportunity to consider this vital issue.
>
> We therefore strongly urge that you issue the public notice necessary to the commencement of public hearings on the removal of allocation and price controls from retailers and wholesalers of fuel oil and other petroleum products.

Section 12(c)(2) of the Emergency Petroleum Allocation Act of 1973 (EPAA) requires that an exemption amendment apply to only one oil or one refined product category, and specifies that No. 2 heating oil and No. 2-D diesel fuel constitute a single product category. FEA proposed the exemption of No. 2 heating oil, No. 2-D diesel fuel and other middle distillate

fuels (No. 1 heating oil, No. 1-D diesel fuel and kerosene, which are hereinafter referred to as "other middle distillates") in a single notice of proposed rulemaking and issued a single document containing its preliminary findings and views related to the exemption. However, as required by the EPAA, FEA has determined separately for No. 2 heating oil and No. 2-D diesel fuel and for other middle distillates that an exemption should be adopted, and is today submitting separate exemption amendments ("Energy Actions Nos. 3 and 4") for these product categories for Congressional review of FEA's findings and views supporting these exemptions. The exemption amendment contained in this document, to be submitted as Energy Action No. 4, relates to other middle distillates, which are defined as follows. "No. 1 heating oil" means heating oil grade No. 1 as defined in American Society for Testing and Materials (ASTM) D396-71. "No. 1-D diesel fuel" means diesel fuel grade no. 1 as defined in American Society for Testing and Materials (ASTM) D975-71. "Kerosene" means all petroleum distillate suitable for use as an illuminant when burned in a wick lamp.

One hundred forty-seven written and oral comments were received in response to the notice of proposed exemption. Those offering comments included major integrated refining companies, small and independent refining companies, marketers, ultimate consumers, state governments and trade associations.

Almost all of the parties commenting agreed with FEA that other middle distillates should be exempted from FEA's

allocation and price regulations. This support was based generally upon agreement with FEA's conclusions as to supply and demand projections, competition, and other findings and views set forth in the Preliminary Findings. Parties opposing the exemption of other middle distillates generally based their opposition on the belief that the current surplus supply situation might not continue through the upcoming heating season, that spot shortages might occur, and that if such shortages were to occur, independent marketers and consumers of other middle distillates would be without the protection of price and allocation controls and might be subject to inequitable prices or termination of supply.

FEA has carefully considered the comments of all persons who participated in the rulemaking. Following its consideration, FEA has concluded that its initial view that other middle distillates should be exempted from regulations is correct.

No information or data were presented in this proceeding which significantly alter FEA's preliminary findings and views. FEA does not anticipate that supply shortages will occur in the future as predicted by some comments and in any event FEA has standby authority under section 12(f) of the Emergency Petroleum Allocation Act of 1973 (EPAA) to reimpose allocation and price controls (on a temporary or permanent basis) if necessary to attain the objectives set forth in section 4(b)(1) of the EPAA. Therefore, FEA hereby adopts

the proposed amendments exempting other middle distillates from the Mandatory Petroleum Allocation and Price Regulations. Unless disapproved by either House of Congress under section 551 of the Energy Policy and Conservation Act (EPCA), this exemption will be effective either July 1, 1976 or the first day following the expiration of the 15 day period provided in section 551 for Congressional review, whichever is later.

Although FEA is adopting this exemption amendment based on its firm conclusion that a supply shortage respecting other middle distillates will not occur in the forseeable future, FEA recognizes that unforseeable difficulties, unrelated to the exemption amendment adopted today and confined to particular market areas, could arise. In order to further ensure that any such possible supply problems following the removal of controls do not adversely affect independent marketers and their customers, FEA intends to propose shortly procedures pursuant to which firms experiencing supply problems may obtain supplies. FEA's proposed rule-making in this regard will request comments on programs that operate in a manner similar to the state set-aside program currently in effect and in a manner similar to that by which supplier/purchaser assignments are currently effected.

Findings and Views

In addition to this amendment to exempt other middle distillates from the Mandatory Petroleum Allocation and

Price Regulations, FEA has prepared its findings and views supporting the amendment as required by section 12 of the EPAA based upon its consideration of the comments of those persons who participated in the rulemaking and other information available to FEA. These findings and views are set forth in a document dated June 15, 1976 and entitled "Findings and Views Concerning the Exemption of Middle Distillates from the Mandatory Petroleum Allocation and Price Regulations" ("Findings and Views"). These findings and views may be summarized, in part, as follows:

(1) Other middle distillates are not in short supply.

-- Projected supplies of other middle distillates, taking into account projected expansions of domestic refinery capacity, will be sufficient to meet demand over the near term (1976-1978).

(2) Exemption of other middle distillates from the Mandatory Petroleum Allocation and Price Regulations will not have an adverse impact on the supply of any other oil or refined product subject to the EPAA.

(3) Competition and market forces are adequate to protect consumers, following an exemption of other middle distillates from regulation. In fact a greater degree of competition would be expected after exemption than exists under current regulations.

-- No price increases are anticipated to result directly from decontrol.

-- The market share for other middle distillates of large, integrated refiners has been decreasing since 1972, while that of the large independent and small refiners has been increasing. However, continued controls could lead to a deterioration of competition, resulting in reduced economic efficiency and higher prices.

-- The exemption itself will have a positive effect on competition, in particular enhancing the competitive viability of small and independent refiners and marketers.

-- The exemption would permit purchasers (including consumers) to seek the lowest cost supplier by freely using competitive bids without regard to fixed supplier/purchaser relationships, thereby exerting downward pressure on existing market prices and providing incentives to enhance marketing services.

(4) Exemption of other middle distillates from regulation will not result in inequitable prices for any class of other middle distillate or other product user.

-- Aggregate prices for other middle distillates will remain unchanged by the exemption itself. Prices can, however, be expected to rise over time as the result of increased domestic and foreign crude costs.

(5) Exemption of other middle distillates from the price and allocation regulations is consistent with the attainment of the objectives set forth in section 4(b)(1) of the EPAA.

-- Since an adequate supply is anticipated, the continued allocation and pricing of other middle distillates are not necessary to protect the public health, safety and welfare, and the national defense [Section 4(b)(1)(A)]; the maintenance of all public services [Section 4(b)(1)(B)]; the maintenance of agricultural operations [Section 4(b)(1)(C)]; or the maintenance of exploration for and production or extraction of fuels and minerals [Section 4(b)(1)(G)].

-- Adequate supply and the positive effects of increased competition insure that the exemption is consistent with the equitable distribution of crude oil, residual fuel oil and refined petroleum products [Section 4(b)(1)(F)] and

that the exemption will have no adverse effect on the allocation of suitable crude oil to U.S. refineries [Section 4(b)(1)(E)].

-- Because the regulations issued pursuant to the EPAA are designed to deal primarily with shortage conditions, the exemption is not only consistent with but, in the current period of ample supplies, should actually facilitate the attainment of the objectives of preservation of an economically sound petroleum industry [Section 4(b)(1)(D)]; economic efficiency [Section 4(b)(1)(H)]; and minimization of economic distortions, inflexibility, and interference with market mechanisms [Section 4(b)(1)(I)].

The Findings and Views also state FEA's views concerning the potential economic impacts of exempting other middle distillates from the Mandatory Petroleum Allocation and Price Regulations. It is not anticipated that there will be any adverse state or regional impacts resulting from the proposed exemption. In fact, governmental units which use large quantities of other middle distillates will find that exemption will permit them to use competitive bids more easily. In addition, FEA anticipates no adverse economic impacts on the availability of consumer goods or services, the gross national product, small business or the supply and availability of energy resources as fuel or feedstock for

industry. FEA expects that the exemption will have a positive effect on competition. The exemption is likewise expected not to cause an adverse effect on employment or consumer prices. FEA's analysis of the effects of the exemption on the rate of unemployment in the U.S., on the Consumer Price Index and on the implicit price deflator for the gross national product are set forth in detail in the Findings and Views.

Allocation of Increased Crude Oil Costs to Other Middle Distillates

The refiners' cost allocation formulae of § 212.83(c) provide that the portion of a refiner's total increased costs of crude oil and increased non-product costs which are incurred in a month of measurement and which are attributable on a proportionate volumetric basis to the quantity of exempt products produced from crude oil must be excluded from the amount of increased costs which may be passed through in prices charged for covered (i.e., non-exempt) products. Increased costs incurred with respect to purchases of exempt products are excluded from the total of increased costs of purchased product permitted to be included in maximum allowable prices charged for covered products. These exclusions effectively prevent increased costs incurred beginning with the month prior to the effective date of the exemption of a product and attributable to that exempt product from being passed through in prices charged for non-exempt products. The notice of proposed rulemaking noted

the substantial amounts of unrecovered increased costs currently allocable to maximum allowable prices for middle distillates and the fact that these increased costs could be reallocated under current price rules to maximum allowable prices for gasoline prior to the effective date of the exemption of middle distillates. FEA therefore proposed to limit the reallocation of any increased costs attributable to other middle distillates, effective as of the date of the April 21 notice. FEA requested comments on both the extent and the effective date of this proposed limitation in light of the seasonal pricing patterns for gasoline and certain middle distillates and any other historic pricing practices relevant to this issue.

Parties commenting on this issue generally opposed reducing refiners' banked costs. The great majority of this opposition was voiced by refiners which stated that: (1) the limitation would be inconsistent with the general feature of the price rules permitting more than a proportionate amount of increased costs to be recovered in gasoline prices; and (2) the limitation would penalize refiners by causing them to lose unrecovered costs. Although the refiner price rules do permit a disproportionate allocation of increased costs to gasoline prices, in no event do the price rules permit increased costs attributable to exempt products to be recovered in lawful prices charged for covered products; and while it is true that the limitation would prohibit the recovery of

these costs in gasoline prices, it does not follow that these costs are "lost". Such costs may be recovered without any restrictions whatsoever in prices charged for the exempt middle distillates to which they are properly attributable. Accordingly, the refiner price rules are amended to prohibit the reallocation of increased costs attributable to other middle distillates, effective April 21, 1976. Other conforming amendments to the price regulations of Part 212 are also being adopted to reflect the exemption of other middle distillates.

On April 28, 1976, FEA adopted reallocation of increased product costs provisions for resellers which granted them the same pricing flexibility previously restricted to refiners. The same reasons which have convinced FEA that the refiner price rules should be amended to prohibit the reallocation of banked costs attributable to other middle distillates, effective April 21, 1976, are equally applicable to resellers. Therefore, conforming changes have been made to the reseller regulations in § 212.93(i)(2).

Authority Delegated to the Governor of Puerto Rico

On March 7, 1974 the Administrator of FEA (then FEO) delegated to the Governor of the Commonwealth of Puerto Rico all authority previously delegated to the Administrator of FEO by section 3(a) of Executive Order 11748 with respect to the allocation of several refined petroleum products, including middle distillate, within the Commonwealth of Puerto Rico. The March 7 delegation of authority, insofar as it applies

to other middle distillates, will be revoked by separate order to reflect the exemption amendments adopted today.

Revocation of Part 215

The exemption amendments adopted today result in an end to the effectiveness of Part 215 of FEA's regulations, since middle distillates constitute the greatest part of the fuels that remain subject to Part 215. FEA is therefore revoking Part 215, the Low Sulfur Petroleum Products Regulation.

Effective Date and Standby Authority

Comments and testimony received with respect to the time necessary between the promulgation of the exemption amendment and its implementation generally supported FEA's tentative conclusion that July 1, 1976 is the most appropriate effective date for the exemption of other middle distillates. In particular, the comments noted that an early effective date was necessary to facilitate the implementation of "summer fill" and other inventory maintenance programs historically utilized in the marketing of other middle distillates.

Section 12(f) of the EPAA provides that following the exemption of any product from regulation, FEA shall have the authority at any time to reimpose price and allocation controls if necessary to attain the objectives of the EPAA. For this reason, FEA is adopting amendments which stay the effectiveness of Subpart G of Part 211 and of the general price regulations as they would otherwise apply to other

middle distillates without deleting those regulations from the Code of Federal Regulations. They are in effect converted to standby status, so that in the event of shortages or other occurrences which might require reimposition of controls, they may be quickly put into effect.

(Emergency Petroleum Allocation Act of 1973, Pub. L. 93-159, as amended by Public L. 94-163; Federal Energy Administration Act of 1974, Pub. L. 93-275; E.O. 11790 (39 FR 23185)).

In consideration of the foregoing, Parts 210, 211 and 212 of Chapter II, Title 10 of the Code of Federal Regulations, are amended and Part 215 is revoked as set forth below, effective July 1, 1976 or the first day following the expiration of the 15-day review period under section 551 of the EPCA, whichever is later, unless this amendment is disapproved by either House of Congress pursuant to the review procedures set forth in section 551 of the EPCA.

Issued in Washington, D.C., June 15, 1976.

Michael F. Butler
General Counsel

1. Section 210.35 of Part 211 is amended by the addition of a new paragraph (c) to read as follows:

§ 210.35 Exempted products.

* * * * *

(c) No. 1 heating oil, No. 1-D diesel fuel and kerosene, as defined in Part 212 Section 212.31, are exempt from the provisions of Part 211 and Part 212 of this chapter.

2. Section 211.1 is amended in paragraph (b) by the addition of a new subparagraph (6) to read as follows:

§ 211.1 Scope.

* * * * *

(b) Exclusions.

* * *

(6) Notwithstanding the provisions of Subpart G of this part, No. 1 heating oil, No. 1-D diesel fuel, and kerosene, as defined in Section 212.31 of this chapter, are excluded from this part.

3. Section 212.31 is revised in the definition of "covered products" to read as follows:

§ 212.31 Definitions.

* * *

"Covered products" means aviation fuels, benzene, butane, crude oil, gas oil, gasoline, greases, hexane, lubricant base oil stocks, lubricants, naphthas, natural gas liquids, natural gasoline, No. 2 heating oil and No. 2-D

diesel fuel, propane, special naphthas (solvents), toluene, unfinished oils, xylene, and other finished products. A blend of two or more particular covered products is considered to be that particular covered product constituting the major proportion of the blend.

* * *

4. Section 212.83 is revised in paragraph (d) by the addition of a new subparagraph (6) to read as follows:

§ 212.83 Price rule.

* * * * *

(d) Realloaction of increased costs among product categories.

* * *

(6) No. 1 heating oil, No. 1-D diesel fuel, and kerosene. Beginning on April 21, 1976:

(i) The amount of increased costs attributable to general refinery products which bears the same proportion to the total of such costs as the combined volume of No. 1 heating oil, No. 1-D diesel fuel, and kerosene refined by the refiner from crude oil during the calendar year 1975 bears to the total volume of all general refinery products refined by the refiner from crude oil during the calendar year 1975, shall be excluded from reallocation to maximum allowable prices for covered products other than kerosene.

* * * * *

5. Section 212.93 is amended in clause (i) of subparagraph (2) of paragraph (i) to read as follows:

§ 212.93 Price rule.

* * * * *

(i) Reallocation of increased product costs among products.

* * *

(2) * * *

(i) General refinery products.

(A) To the extent that a seller does not allocate its increased product costs for a particular general refinery product, other than propane, to the prices for that product, it may reallocate the unallocated part of its increased product costs for the product to the prices for gasoline or for any other general refinery product (or products) except propane, in whatever amounts the seller deems appropriate. No increased product costs for general refinery products other than propane may be reallocated to the prices for No. 2 oils, for propane, or for aviation jet fuel.

(B) Beginning on April 21, 1976, no increased costs for No. 1 heating oil, No. 1-D diesel fuel, or kerosene may be reallocated to maximum allowable prices for any other covered product.

6. Part 215 is revoked.

# FINDINGS AND VIEWS CONCERNING THE EXEMPTION OF MIDDLE DISTILLATES FROM THE MANDATORY PETROLEUM ALLOCATION AND PRICE REGULATIONS, JUNE 15, 1976

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FINDINGS AND VIEWS CONCERNING THE EXEMPTION OF MIDDLE DISTILLATES FROM THE MANDATORY PETROLEUM ALLOCATION AND PRICE REGULATIONS


FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

JUNE 15, 1976

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EXECUTIVE SUMMARY

To exempt middle distillates from the Mandatory Petroleum Allocation and Price Regulations, the Federal Energy Administration (FEA) must find "(A)...that such oil or refined product category is no longer in short supply and that exempting such oil or refined product category would not have an adverse impact on the supply of any other oil or refined petroleum product..." [Section 12(d)(1)(A) of the Emergency Petroleum Allocation Act of 1973 (EPAA)]. FEA finds that middle distillates are not in short supply and supplies are expected to be adequate during the near-term future. The national middle distillate allocation fraction is approximately 1.0 and surplus product is available in the marketplace. Domestic refinery capacity utilization for 1975 is estimated to have been only 85.7 percent of the available 15.1 million barrels per day total capacity (compared with the pre-embargo long-term norm of approximately 90 percent utilization of then available total capacity) and refinery yield capability is sufficiently flexible to meet any anticipated increased demand. Similar conditions exist with respect to available world refinery capacity. As a result, FEA concludes that ample unused refinery capacity assures that the exemption of middle distillates will not have an adverse impact on the supply of any other petroleum product.

-- To exempt middle distillates, FEA must also find "(B)...that competition and market forces are adequate to protect consumers and that exempting such oil or refined product category will not result in inequitable prices for any class of users of such oil or product..." [Section 12(d)(1)(B) of the EPAA of 1973]. With ample supplies of middle distillates, competition exerting downward pressure on prices, and the industry generally operating at a historically adequate level of profitability, the exemption of middle distillates from price and allocation controls is not expected to cause any significant price increases. Thus, FEA finds that competition and market forces are adequate to protect consumers and that exempting middle distillates from regulation will not result in inequitable prices for any class of end users or other product uses.

-- The FEA further finds that the exemption of middle distillates is consistent with the attainment of the objectives set forth in the EPAA.

-- It is also FEA's analysis that the exemption of middle distillates from regulation will have no significant effect on the rate of unemployment,

the Consumer Price Index, or the Gross National Product.

In summary, continued regulation of middle distillates is no longer necessary to achieve the objectives of the EPAA and is now actually operating to frustrate the achievement of those objectives. Consequently, the FEA has concluded that the Mandatory Petroleum Allocation and Price Regulations should be amended to exempt middle distillates and is transmitting such an amendment to the Congress as required by Section 12 of the EPAA.

# FINDINGS AND VIEWS CONCERNING THE EXEMPTION OF MIDDLE DISTILLATES FROM THE MANDATORY PETROLEUM ALLOCATION AND PRICE REGULATIONS

## CHAPTER I

## INTRODUCTION

This report presents the Federal Energy Administration's findings and views with respect to its proposal to exempt middle distillates from the Mandatory Petroleum Allocation and Price Regulations, issued pursuant to the Emergency Petroleum Allocation Act of 1973 (EPAA), (10 CFR Parts 210, 211, 212, and 215). The Energy Policy and Conservation Act (EPCA), Public Law 94-163, in section 455 added Section 12 to the EPAA (December 22, 1975), requiring that any amendment submitted to the Congress to exempt a product or product category from regulation be supported with certain findings and FEA views on a variety of matters related to the exemption.

Based on an analysis of historic and projected supply, demand, and price trends, the FEA has concluded that mandatory allocation and price controls are no longer necessary for middle distillates and that exemption of middle distillates is consistent with the attainment, to the maximum extent practicable, of the objectives specified in Section 4 (b)(1) of the EPAA. Accordingly, the FEA is submitting an amendment to the Congress, in accordance with provisions of section 12 of the EPAA, to exempt middle distillates from allocation and price controls. If neither House of Congress disapproves this amendment during the 15-day period allowed

for legislative review, the exemption would become effective upon the date specified in the amendment and the regulations would be converted to standby status.

To ensure that the findings and views ultimately submitted to the Congress are based on the most comprehensive and accurate data available, represent the most reasonable conclusions drawn from such data, and fully support the exemption of middle distillates from regulation, the FEA published preliminary findings and views on the possible exemption of middle distillates from price and allocation controls. The written and oral comments received in response to these preliminary findings and views, where ever considered valid and appropriate, are now reflected in these final findings and views.

For purposes of this proposed exemption, middle distillates include kerosene, No. 1 and No. 2 fuel oils, and No. 1-D and No. 2-D diesel fuel as defined in FEA's price regulations in 10 CFR 212.31. (See Appendix I) Kerosene-base jet fuel is not included in this proposed exemptions nor are No. 4 heating oil and No. 4-D diesel fuel.*

---

* No. 4 heating oil and No. 4-D diesel fuel were proposed for exemption pursuant to an amendment which exempts residual fuel oils from regulation. That amendment became effective June 1, 1976. Aviation fuels (including kerosene-base and naphtha-base jet fuel) are not currently being proposed for exemption.



Section 12(c)(3)(B) of the EPAA as amended by the EPCA requires that an amendment to exempt No. 2 heating oil and No. 2-D diesel fuel be submitted separately for Congressional review from an amendment to exempt other refined petroleum products. The FEA has determined that middle disillates should be exempted from regulations. Therefore, two amendments are being submitted to Congress -- one to exempt No. 2 heating oil and No. 2-D diesel fuel and another amendment to exempt all other middle distillates. However, the findings and views to support both amendments are based on this analysis.

The FEA's findings regarding the exemption of middle distillates from regulation are:

- o Middle distillates are not in short supply.
- o Exemption of middle distillates from the allocation and price regulations will not have an adverse impact on the supply of any other oil or refined petroleum product subject to the EPAA.
- o Competition and market forces are adequate to protect consumers following exemption of middle distillates from regulation.
- o Exemption of middle distillates from regulation will not result in inequitable prices for any class of user of middle distillates or other products.

The FEA also finds that the exemption of middle distillates from price and allocation regulations is consistent with the objectives set forth in Section 4 (b)(1) of the EPAA. Since supplies of middle distillate are adequate, and should continue to be sufficient, continued mandatory price and allocation controls for middle distillates are unnecessary to:

- o Protect public health, safety, welfare, and national defense [Section 4(b)(1)(A)];
- o maintain all public services [Section 4(b)(1)(B)] and agricultural operations [Section 4(b)(1)(C)];
- o maintain exploration for and production or extraction of fuels [Section 4(b)(1)(G)]; and
- o insure equitable distribution of crude oil, residual fuel oil, and refined petroleum products [Section 4(b)(1)(F)].

Because the regulations issued pursuant to the EPAA are designed to deal primarily with shortage conditions, the FEA has concluded that the exemption is not only consistent with but should actually facilitate the attainment of the following EPAA objectives in the current period of ample supplies:

- o preservation of an economically sound petroleum industry [Section 4(b)(1)(D)];
- o economic efficiency [Section 4(b)(1)(H)]; and
- o minimization of economic distortions, inflexibility, and interference with market mechansims [Section 4(b)(1)(I)].



Further, the exemption should not have an adverse effect on allocating suitable cruoe oil to U.S. refineries [Section 4(b)(1(E)], maintaining energy production, or providing for maximum use of refinery capacity.

FEA's views and analysis are that the exemption of middle distillates from regulation will not have an aoverse effect on:

- Any state or region of the country
- availability of consumer goods and services
- the Gross National Product (GNP)
- competition
- small businesses
- the supply and availability of energy resources for use as fuel or feedstock for industry
- the Consumer Price Index, consumer prices, or the implicit price deflator for the GNP, and
- the rate of unemployment

Chapter II provides background information on use, production, and distribution of middle distillates while Chapter III analyzes the historical interaction of supply, demand, and price, and explores the market structure for middle distillates during 1968-1975, prior to and during imposition of allocation and price controls. Chapter IV examines the effects upon middle distillate supply, demand

price and market structure of exempting middle distillates from controls and indicates the positive benefits to be derived from such exemption. In Chapter V, the potential economic impacts of exemption are evaluated, and Chapter VI provides a final summary of the FEA's findings and views in support of its judgment that middle distillates should be exempted from the Mandatory Petroleum Allocation and Price Regulations.

## CHAPTER II

## BACKGROUND

This chapter provides background information regarding the middle distillate products, their refining, their uses and their distribution.

Analysis of the impact of exempting middle distillates is complicated by the manner in which data on these products is collected and maintained. The Federal Energy Administration's Mandatory Petroleum Allocation Regulations define middle distillates in Section 211.51 as:

> "any derivatives of petroleum, including kerosene, home heating oil, range oil, stove oil, and diesel fuel, which have a fifty percent boiling point in the ASTM D86 standard distillation test falling between 371°F and 700°F. Products specifically excluded from this definition are kerosene-base and naphtha-base jet fuel, heavy fuel oils as defined in VV-F-815C or ASTM D-396, grades #4, 5 and 6, intermediate fuel oils (which are blends containing #6 oil), and all specialty items such as solvents, lubricants, waxes and process oil."

The definition of middle distillates in Section 212.31 of the Mandatory Petroleum Price Regulations reads as follows:

> "Nos. 1 and 2 heating oils, Nos. 1-D, 2-D, and 4-D diesel fuels, No. 4 fuel oil, and kerosene and aviation fuels."

It is useful to note, for purposes of this analysis, that the Bureau of Mines (BOM) maintains aggregate sales and refinery production data for distillate fuel oil (on a basis that includes Nos. 1 and 2 heating oils, Nos. 1-D, 2-D and 4-D diesel fuels, and No. 4 fuel oil) and kerosene.

Because both the FEA's definition of middle distillates for price purposes and that used by BOM include products which are not being proposed for exemption in this report, the FEA has adjusted data obtained from FEA and BOM sources to be on a comparable basis where possible. In some cases this was not done, but this should not affect conclusions drawn from the data because the quantity of excluded product in any particular compilation is insufficient to cause significant distortions. For example, inclusion of No. 4 oils is unavoidable since no discrete data are available for these products; however, since No. 4 oils account for less than 4 percent of total middle distillate supply their inclusion in data presented in this report should not affect conclusions drawn from that data.



Understanding supply, demand, price, and market structure relationships for middle distillates requires a general knowledge of refining processes. This is necessary so that the close relationship of these products with other products subject to FEA regulations may be seen in its proper perspective. Therefore, in this chapter an overview of production and relationships among various refinery yields precedes a discussion of the nature, production, and uses of middle distillates, as well as a brief summary of supply, demand, price and marketing characteristics of the middle distillate products.

The Refining Process

The first stage in refining is distilling crude oil into various fractions. Crude oil is first boiled and fractions are recovered at different levels of the fractionation tower, where its components condense according to different boiling points. The lightest-weight, lowest-boiling (less than 85 $^{o}$F) fractions, the liquid petroleum gases (LPG's), including ethane, propane, and butane, emerge directly from the top of the tower. Naphtha follows with an approximate boiling range of 85 $^{o}$ to 430 $^{o}$F. Gas oils are fractions whose boiling points are at or above 430$^{o}$ F. Finally, a heavy residue is obtained from the bottom of the tower. These initial fractions must be further refined to yield relative volumes and specific properties of products required by end-users.

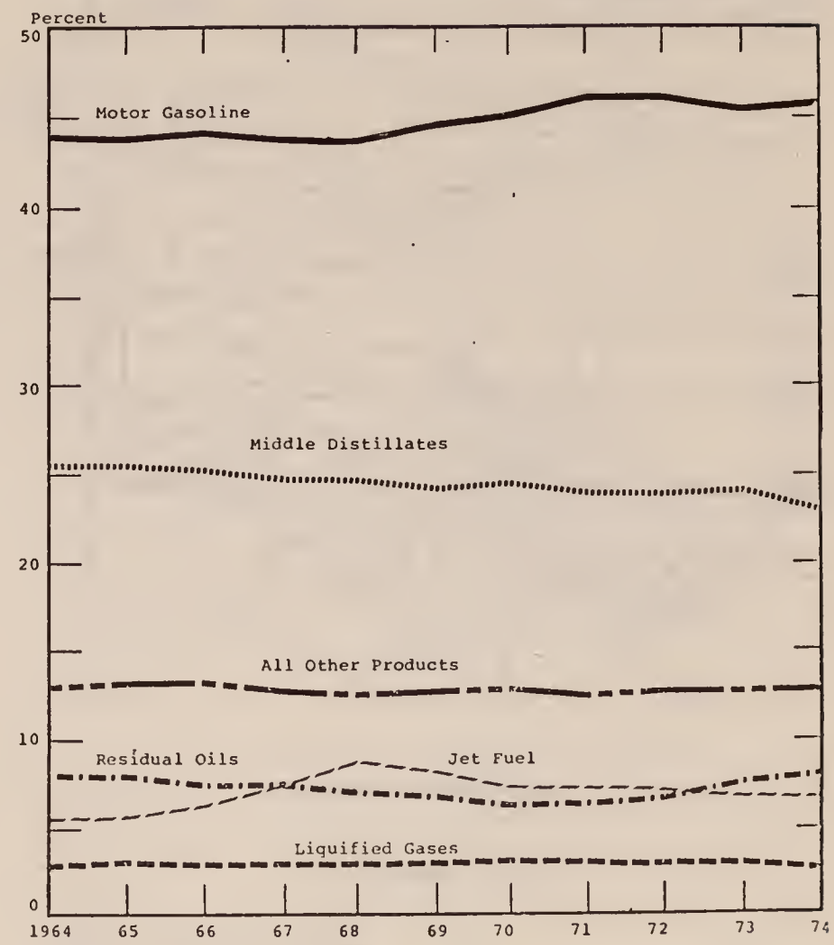
Naphthas and gas oils are not finished refined products. They are two principal distillation fractions in a refinery, from which many finished products are made. Most naphtha eventually ends up as motor gasoline and most gas oil eventually ends up as one of the middle distillates. The naphtha fraction from which motor gasoline is made constitutes about 25 percent of distillation yield (excluding light ends) while gasoline sales make up nearly 50 percent of refinery sales. On the other hand, the gas oil fraction is about 45 percent of yield, but products made from it, including home heating oil and diesel fuel, are only about 30 percent of total demand for refinery products. Figure II-1 shows relative percentage yields per barrel of all refinery products from 1964 to 1974.

Naphtha stocks used for gasoline must be blended to give the final product a sufficient octane rating. Accordingly, additional refining processes are used to increase the volume of naphtha stocks and produce finished products with desired properties. This is accomplished by breaking down or "cracking" some of the larger molecules in the heavier gas oil and residue stocks as well as combining the smaller molecules of some of the lighter oils through alkylation. In a catalytic cracker, or "cat-cracker," heavier stocks are broken down in the



FIGURE II-1

Percentage Yield of Refined Products from Crude Oil
1964-1974
in the United States Annually




Source: Bureau of Mines

presence of a catalyst, which is not itself consumed in the chemical reaction. A hydrocracker uses hydrogen under high temperature and pressure as a catalyst. Cat-crackers produce additional naphthas, light ends, lighter gas oils, and a heavy aromatic (ring-compound) gas oil residue. This residue may be further cracked in the hydrocracker to yield still more naphtha and light ends, with some residue still remaining after this processing. A simplified diagram of the refinery process is shown in Figures II-2(a) and II-2(b).

Use

Middle distillates are used primarily for space heating in residential, commercial, and industrial facilities; highway motor fuel in trucks and buses; boiler fuel in industrial applications; fuel for railroad locomotives and steam generation for power plants. Middle distillates' use by category for 1974 is shown in Figure II-3.

Space heating represents the largest use category for middle distillates, accounting for approximately half of the annual consumption. Demand peaked at approximately 610 million barrels in 1972 and dropped to a low of approximately 540 million barrels in 1974. The decline can be attributed to warmer than normal winters, energy conservation efforts and other factors. Highway use, on the other hand, increased from approximately 150 million barrels in 1970 to approximately 220 million barrels in 1973 and 1974 (see Table I).



FIGURE II-2(a)

REFINERY FLOW SHEET

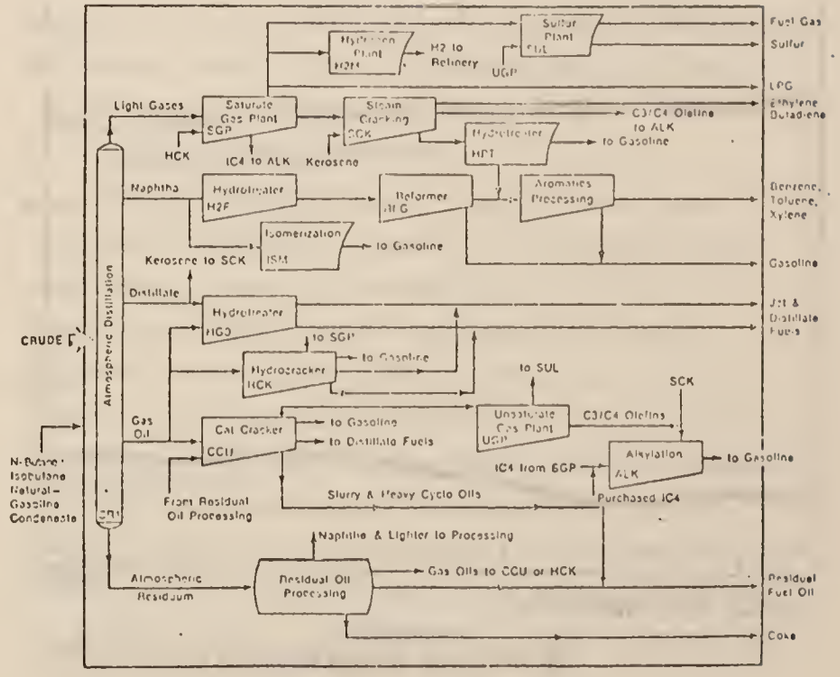


FIGURE II-2(b)

RESIDUAL OIL PROCESSING

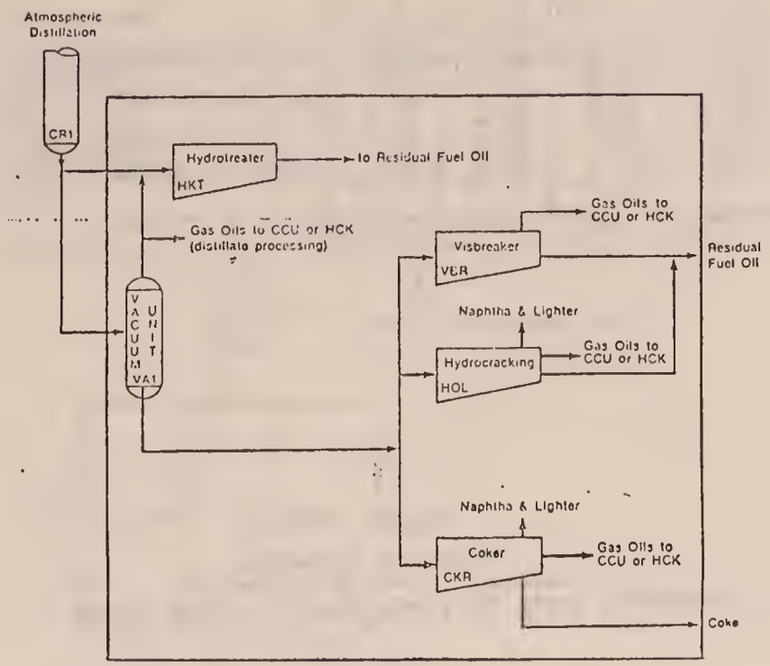
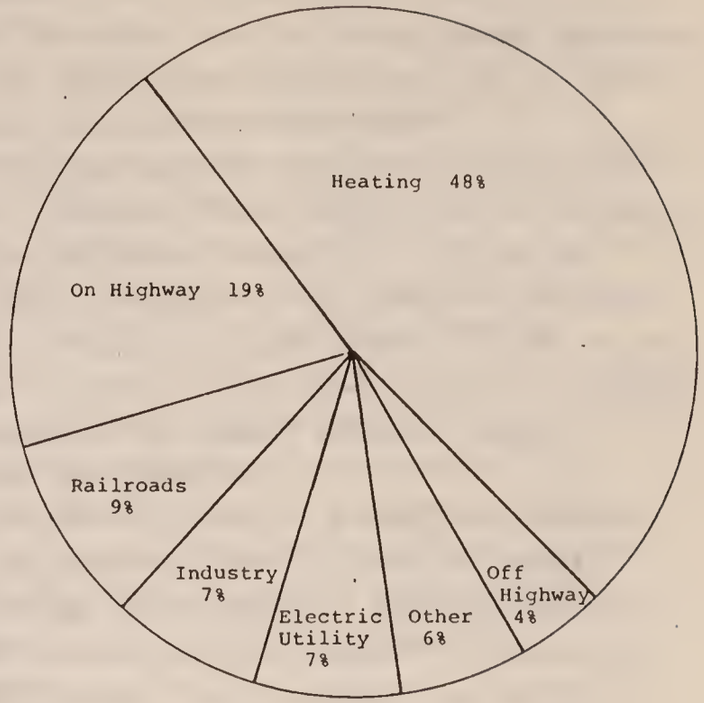





FIGURE II - 3

Middle Distillate Usage by Category for 1974




Source: Bureau of Mines

TABLE I

Yearly Sales of Middle Distillate Fuels (Excluding Jet Fuel)*
In The United States 1970-74
(Thousands of Barrels)

| USE | 1970 | 1971 | 1972 | 1973 | 1974 |
|---|---|---|---|---|---|
| Heating | 594,323 | 593,185 | 609,536 | 598,128 | 542,586 |
| Industrial (Excluding Oil Co. Use) | 43,668 | 50,731 | 60,388 | 67,366 | 64,036 |
| Oil Company Use | 11,518 | 14,038 | 13,405 | 14,902 | 13,805 |
| Electric Utilities Companies | 24,770 | 35,329 | 68,334 | 77,950 | 84,661 |
| Railroads | 88,416 | 86,251 | 97,001 | 102,828 | 102,549 |
| Vessels | 19,503 | 20,959 | 22,125 | 26,706 | 24,257 |
| Military | 12,447 | 17,427 | 20,187 | 19,593 | 17,748 |
| On-highway diesel | 148,796 | 166,961 | 189,055 | 221,420 | 219,612 |
| Off-highway diesel | 46,123 | 46,925 | 50,186 | 55,541 | 48,446 |
| All other | 33,660 | 30,361 | 30,507 | 29,519 | 24,634 |
| United States Total | 1,023,224 | 1,062,237 | 1,160,724 | 1,213,978 | 1,142,334 |

Source : U. S. Bureau of Mines

* Includes kerosene



Transportation and Distribution

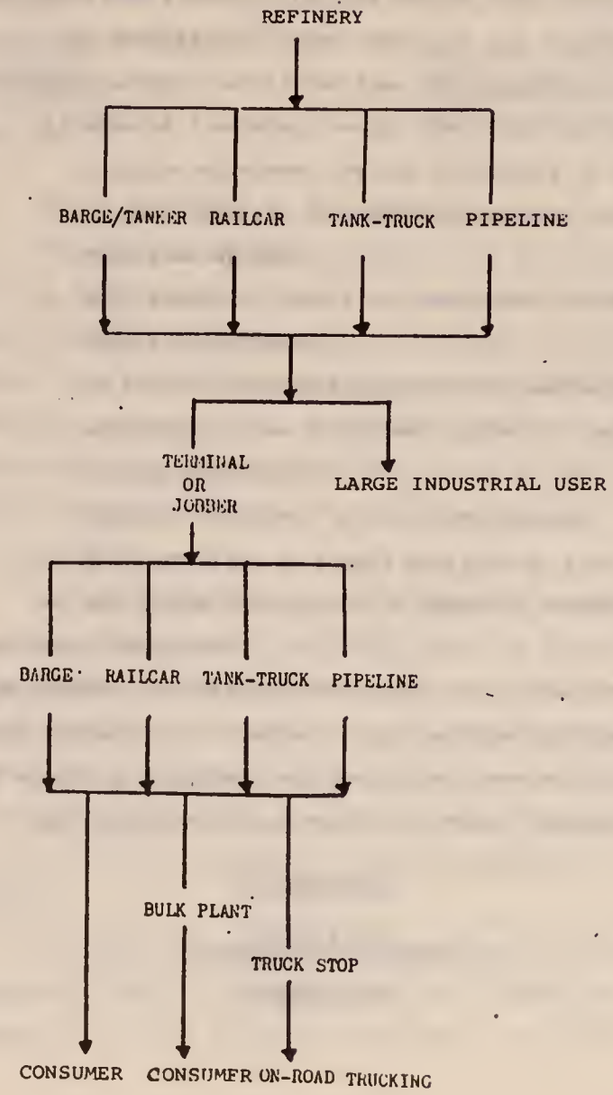
Virtually all middle distillates (90-95 percent) sold in the U.S. are produced in domestic refineries. Moving the product from the refinery to the marketplace involves a complex network of pipelines, transportation services, and storage facilities. Specific routes chosen to deliver product are largely a result of refinery location, amount of product to be moved, and location of consumers. (See Figure II-4.)

Heating oil, for example, may leave a coastal refinery by barge for a fresh water port where it is pumped through a pipeline to an inland terminal. It may then be loaded into railway tank cars and shipped to a local bulk plant for distribution by tank truck to the ultimate consumer. Conversely, many industrial users near refineries have direct pipelines into tank farms and do little more than open valves to receive their product.

There are three fundamental points in the distribution network: the refinery, terminal, and bulk plant. Each plays an important role in the distribution of product. The refinery is a production site equipped to move very large quantities of product and having a limited ability to deal with small volumes.

FIGURE II-4

SIMPLIFIED DISTILLATE TRANSPORTATION AND DISTRIBUTION NETWORK






Heavy volume operators having large terminal storage usually provide the intermediate distribution link between the refiner and local retail fuel dealers or bulk plants. The ability of terminals to accept, store and distribute large volumes of product allows the refinery to produce product on a continuing basis, which helps maintain high refinery utilization. Terminal operators in turn redistribute product in quantities more in keeping with the limited capabilities of small resellers.

The final element in the distribution chain of middle distillates is the local bulk plant, particularly in rural areas where a substantial portion of middle distillates fuel is used by small consumers for agricultural and heating use. Small bulk plant operators have traditionally provided specialized delivery services to the local communities. Services include 24-hour delivery during planting and/or harvesting seasons, delivery to unimproved areas such as mines, quarries, and construction sites, and the ability to handle relatively small orders for direct delivery to homeowners.

Within urban areas, the functions of a jobber, bulk plant operator and fuel oil dealers often overlap. The jobber may own a bulk plant and sell product direct to consumers as well as to other dealers.



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## CHAPTER III

## HISTORICAL CONDITIONS (1968-1975)

### INTRODUCTION

The historical interaction of supply, demand, and price or middle distillates, and the market structure of the petroleum industry are examined in this chapter in order to make the findings required by the EPAA. These findings raise the following questions:

- Are middle distillates in adequate supply?
- Will exemption of middle distillates from regulations result in shortages of other refined products?
- Will competition and market forces be adequate to protect consumers following an exemption of middle distillates?
- Will exemption result in inequitable prices for any class of user?
- Is the exemption of middle distillates consistent with the attainment of the objectives of the EPAA?

To provide a perspective for assessing the effects of exempting middle distillates from the Mandatory Allocation and Price Regulations, these questions are addressed from an historical viewpoint for the period 1968 through 1975.

Beginning in 1971, various price and allocation rules were implemented which had both a direct and an indirect impact on the free market relationships. A chronological review



of these price and allocation controls is therefore presented first in this chapter, followed by a discussion of the effects which these controls have had on the supply, demand, and price of middle distillates and on the market structure of the petroleum industry.

#### Chronology of Allocation and Price Controls

Allocation and price controls on middle distillates have been imposed at various times over the past several years as part of major U.S. economic regulatory programs beginning with the series of price controls established under the Economic Stabilization Program. The principal allocation and price controls involved, for purposes of this report, are as follows:

| Program | Effective Date | Description and Responsible Office |
|---|---|---|
| Phase I | Aug. 15, 1971 | Original Price Freeze<br>Office of Emergency Preparedness |
| Phase II | Nov. 13, 1971 | Mandatory Price Controls<br>Price Commission |
| Phase III | Jan. 11, 1973 | Voluntary Price Standards<br>Cost of Living Council |
| Special Rule No.1 | Mar. 6, 1973 | Mandatory Price Controls on Petroleum Industry<br>Cost of Living Council |
| Voluntary Petroleum Allocation Program (VPAP) | May 10, 1973 | Office of Oil and Gas, Dept. of Interior<br>Energy Policy Office (EPO) |
| | June 13, 1973 | Price Freeze II<br>Cost of Living Council |
| Phase IV | Aug. 19, 1973 | Mandatory Price Controls on Petroleum Products<br>Cost of Living Council |

| | | |
|---|---|---|
| Mandatory Middle Distillates Allocation Program | Nov. 1, 1973 | Office of Oil & Gas, Dept. of Interior Energy Policy Office (EPO) |
| Emergency Petroleum Allocation Act of 1973 (EPAA) | Nov. 27, 1973 | Mandatory Allocation & Price Regs. issued Jan. 14. 1974 Federal Energy Office and Federal Energy Administration |

Major Provisions of the Controls

The PHASE I CONTROLS consisted of a general price freeze imposed on all sectors of the U.S. economy for a period of 90 days under which prices were frozen at their August 15, 1971 level. This had the effect of freezing gasoline prices at their seasonally high levels, and, conversely, of freezing home heating oil and other middle distillate prices at their seasonally low price levels.

The PHASE II MANDATORY PRICE CONTROLS established ceiling prices for all industries based on Phase I prices with limited adjustments allowed to reflect increased costs. The Phase II rules therefore had the effect of continuing the seasonal high price levels allowed for motor gasoline, while middle distillate refined products were held to their seasonal low price levels.

The PHASE III VOLUNTARY PRICE STANDARDS, which followed Phase II, also applied to all industries generally. Under Phase III, increases above prices



lawfully in effect on January 11, 1973, were permitted to reflect increased costs without regard to profit margin limitations. Phase III voluntary controls had the effect of permitting the petroleum industry to correct the price imbalance between motor gasoline and middle distillate refined products that had prevailed under Phases I and II. However, Phase III also had the effect of permitting large increases in petroleum product prices. As a result, Phase III was amended by Special Rule No. 1 on March 6, 1973, the first time price controls were established expressly for the petroleum industry. Under Special Rule No. 1, mandatory price controls were imposed on the sale of crude oil and refined petroleum products by firms with annual sales of $250 million or more, which generally limited price increases to a weighted average price of one percent above the January 11, 1973, base price levels. Special Rule No. 1 applied only to the 23 largest oil companies; therefore petroleum prices continued to rise because of price increases by the uncontrolled portion of the petroleum industry.

Partly because of continuing increases in petroleum prices, PRICE FREEZE II was placed in effect on June 13, 1973, for a 60-day period. This 60-day price freeze was imposed on virtually all consumer prices. At the same time, the Cost of Living

Council was directed to develop Phase IV regulations which were to include measures to stabilize the price of petroleum products.

The PHASE IV CONTROLS FOR PETROLEUM PRODUCTS, developed during the 60-day price freeze, went into effect on August 19, 1973, and provided for a comprehensive system for controlling petroleum prices at the producer, refiner and distributor levels. Controls regarding retailers were implemented on September 7, 1973.

The Phase IV price controls were incorporated into the Mandatory Petroleum Price Regulations now in effect under the EPAA.

The MANDATORY MIDDLE DISTILLATES ALLOCATION PROGRAM, which went into effect on November 1, 1973, required suppliers to allocate to wholesale purchasers supplies equal to volumes purchased in the corresponding month of 1972, or, if these quantities were not available, then a pro rata share of the supplier's supplies. Any supplies available in excess of 1972 levels could be distributed at the supplier's discretion under this program.

The programs established under the EMERGENCY PETROLEUM ALLOCATION ACT OF 1973, and under the Mandatory Petroleum Allocation and Price Regulations, issued January 14, 1974, provided for comprehensive controls for both allocation and pricing of petroleum products at all levels of the petroleum industry. These regulatory programs were established



to deal with the problems created by the reduction in supplies of petroleum product aggravated by the October 1973 oil embargo. These programs were designed in part to preserve, to the extent possible, during a shortage situation, an economically sound and competitive petroleum industry, including the competitive viability of the independent segments of the industry. In addition, these programs contained provisions to assure equitable distribution of refined petroleum products at equitable prices. Also included among these controls is the Domestic Crude Oil Entitlements Program, which was created for the purpose of allowing all refiners to share in the benefits of price controlled crude oil production. Under this program, refiners with greater than average access to low-cost domestic crude oil are required to make payments to refiners who use greater than average amounts of more costly imported crude oil, so that all domestic refiners have an equitable share of the limited quantities of low-priced domestic crude oil.

Under the allocation portion of these regulatory controls, all regions and economic sectors are to receive, to the maximum extent practicable, equitable shares of crude oil, residual fuel oils, and refined petroleum products. Accordingly, a priority allocation system was established for the distribution of petroleum products. As part of this system, a state set-aside of certain petroleum products was created for the purpose of meeting local hardship and emergency requirements.

Current Conditions

During the shortage that occurred as a result of the October 1973 emoargo, the allocation and price regulations achieved a substantial measure of success in easing the impact of the shortage. However, there are clear indications at this time that adequate supplies are available and controls may no longer be needed. In fact, many of the regulations seem to be operating in direct conflict with the objectives of the EPAA in that they are actually inhibiting competition, detracting from economic efficiency, and unnecessarily interfering with the operation of market mechanisms.

Whether the present regulations are needed to ensure equitable prices or adequacy of supply to all users is the subject of the next section, which addresses middle distillates supply, demand, and price patterns before and during controls.



SUPPLY/DEMAND

This section traces the historical growth in demand for middle distillates and examines the adequacy of supply in meeting that demand before and during the four phases of controls.

Growth in Demand

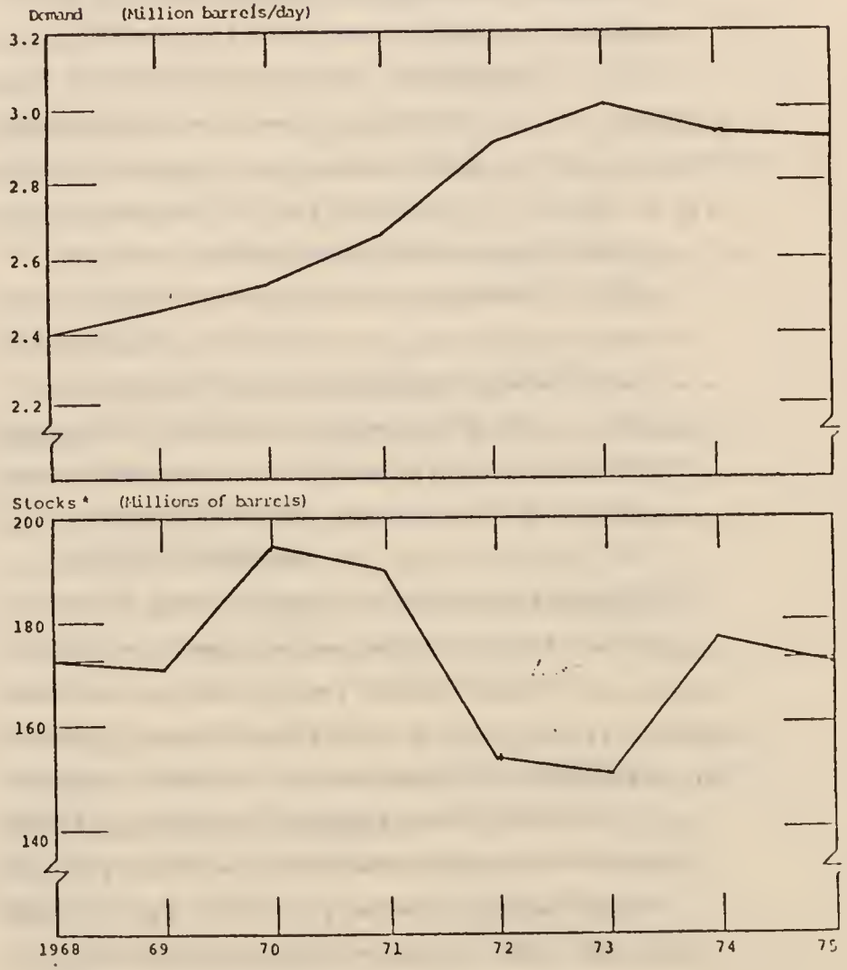
The demand for middle distillates increased fairly steadily from 1968 to 1973, as illustrated in Figure III-1. The annual rate of increase in demand averaged about 4.7 percent from 1968 to 1973, before peaking in 1973 at an average of 3,088,000 barrels per day. The subsequent decrease in demand in 1974 and 1975 (a 2.5 percent decline from the 1973 level) represents a significant departure from the historical demand trend. The combination of the increased middle distillate costs resulting from the embargo and relatively mild winters in 1974 and 1975 compared with 1973 contributed to this dampening of demand.

The demand for middle distillates by Petroleum Administration for Defense (PAD) District (see Figure III-2) reflects the national demand pattern. Demand for middle distillates peaked in each PAD District in the 1972-73 period, declined in 1974, and leveled off in 1975.

Stocks of middle distillates (see Figure III-1) declined 19 percent during the period 1971-1973, while demand grew 13.3 percent. Stocks supplied a portion of this demand in 1972, but were not replenished during the peak demand

DEMAND FOR MIDDLE DISTILLATES IN RELATION TO STOCKS

FIGURE III- 1



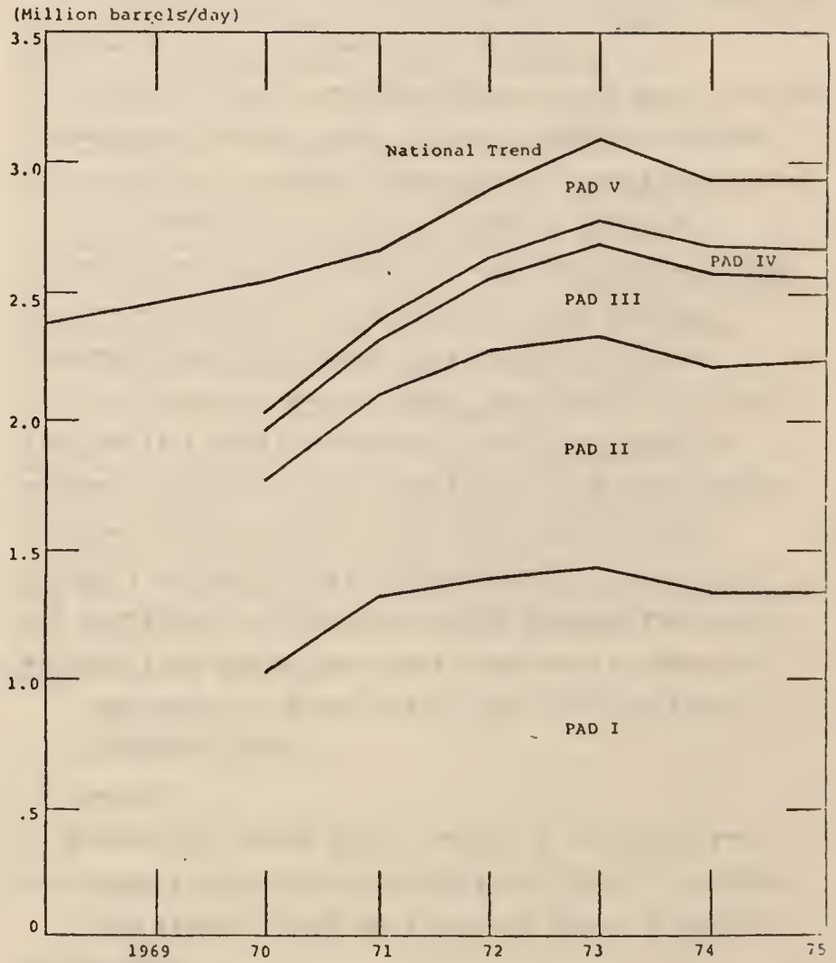

Source: Bureau of Mines

* Based on annual averages



DEMAND BY PAD FOR MIDDLE DISTILLATES

FIGURE III-2




Source: Bureau of Mines

year of 1973. They were rebuilt substantially during 1974. By 1975, stocks of middle distillates had returned to their 1968 and 1969 levels. Post-embargo stock levels probably are not required to be as high as were 1970 and 1971 levels because there is a larger refining capability margin than existed in 1970 and 1971 due to increased refinery capacities. This larger margin can be relied upon to accommodate demand surges, with stocks meeting the initial part of the surge while refinery runs are being increased.

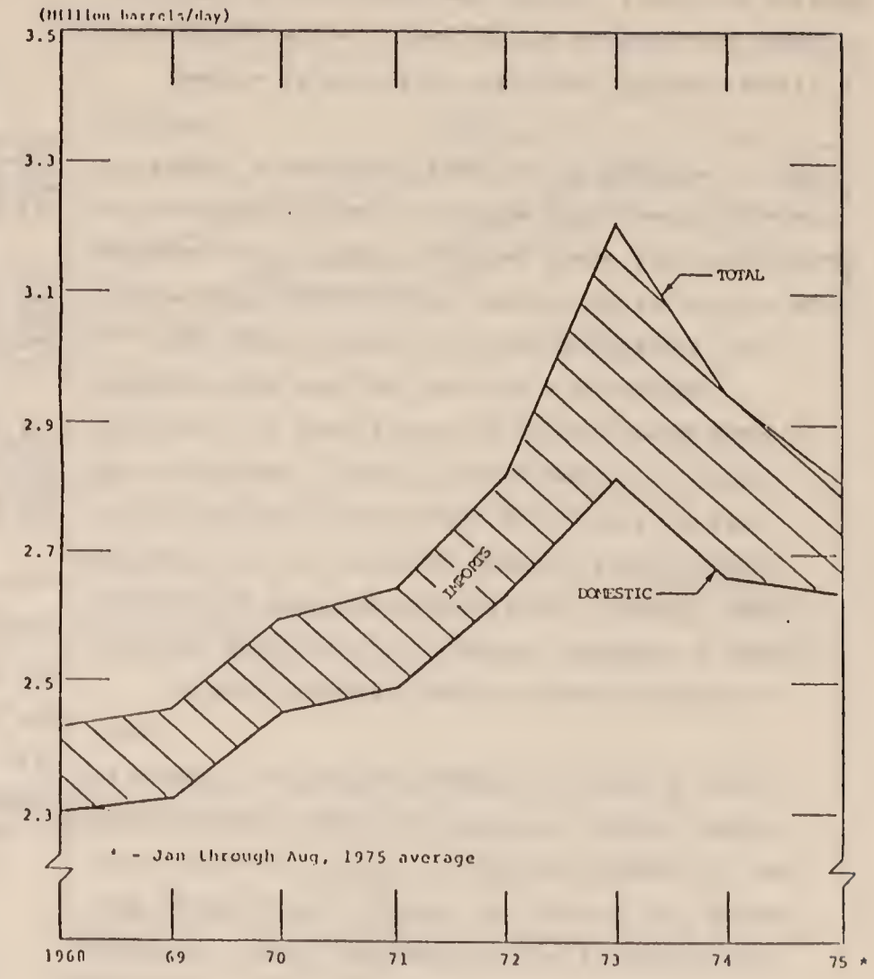
Adequacy of Supply

Growth in domestic production of middle distillates did not quite keep pace with the growth in consumption during the period of 1968 to 1973. (It did in '73 and '74) Production increased 15 percent during the 1968-1975 period while consumption increased 17 percent. Domestic production reached its peak of 2,820,000 barrels per day in 1973 (see Figure III-3) and subsequently paralleled the 1974-1975 decline in consumption. Table II indicates that domestic production of middle distillates historically followed the domestic production trends of all refined products.

In addition to production and change in stocks, the third component of middle distillate supply is imports. The difference between the two curves on Figure III-3 represents the amount of middle distillates



MIDDLE DISTILLATES SUPPLY 1968-1975
FIGURE III-3




Source: BOM

TABLE II

DOMESTIC PRODUCTION OF REFINED PRODUCTS
AT REFINERIES FOR 1968-1975
(Thousands of barrels/day)

| | | Motor Gasoline | *Middle Distillates | Residual Fuel Oil | Jet Fuel | ** Other Products | Total All Products |
|---|---|---|---|---|---|---|---|
| 1968 | | 5,212 | 2,300 | 756 | 863 | 2,001 | 11,132 |
| 1969 | | 5,468 | 2,320 | 729 | 881 | 2,062 | 11,460 |
| 1970 | | 5,699 | 2,454 | 705 | 827 | 2,222 | 11,907 |
| 1971 | | 5,971 | 2,495 | 752 | 834 | 2,245 | 12,297 |
| 1972 | | 6,281 | 2,637 | 799 | 846 | 2,149 | 12,712 |
| 1973 | I Qtr. | 6,213 | 2,872 | 1,035 | 893 | 2,299 | 13,315 |
| | II Qtr. | 6,695 | 2,626 | 914 | 854 | 2,520 | 13,609 |
| | III Qtr. | 6,830 | 2,790 | 890 | 839 | 2,628 | 13,977 |
| | IV Qtr. | 6,366 | 2,992 | 1,089 | 852 | 2,404 | 13,703 |
| | AVERAGE | 6,527 | 2,820 | 971 | 860 | 2,475 | 13,653 |
| 1974 | I Qtr. | 5,950 | 2,505 | 1,003 | 805 | 2,151 | 12,414 |
| | II Qtr. | 6,433 | 2,670 | 1,002 | 849 | 2,415 | 13,369 |
| | III Qtr. | 6,699 | 2,694 | 1,052 | 824 | 2,580 | 13,829 |
| | IV Qtr. | 6,349 | 2,808 | 1,220 | 865 | 2,301 | 13,543 |
| | AVERAGE | 6,358 | 2,668 | 1,070 | 836 | 2,362 | 13,294 |
| 1975 | I Qtr. | 6,285 | 2,688 | 1,356 | 855 | 1,964 | 13,148 |
| | II Qtr. | 6,279 | 2,469 | 1,182 | 856 | 2,121 | 12,934 |
| | III Qtr. | 6,900 | 2,663 | 1,161 | 917 | 2,422 | 14,063 |
| | Average*** | 6,488 | 2,607 | 1,233 | 876 | 2,169 | 13,382 |

Source: BOM

* Excludes Kerosene
** Includes Kerosene
*** 3 Qtrs. Only



imported. Imports remained relatively constant from 1968 through 1972, increased to a peak of 12.3 percent of total supply in 1973, and declined thereafter. The relationship of imports to the total imported supply of crude oil and refined products is shown in Figure III-4.

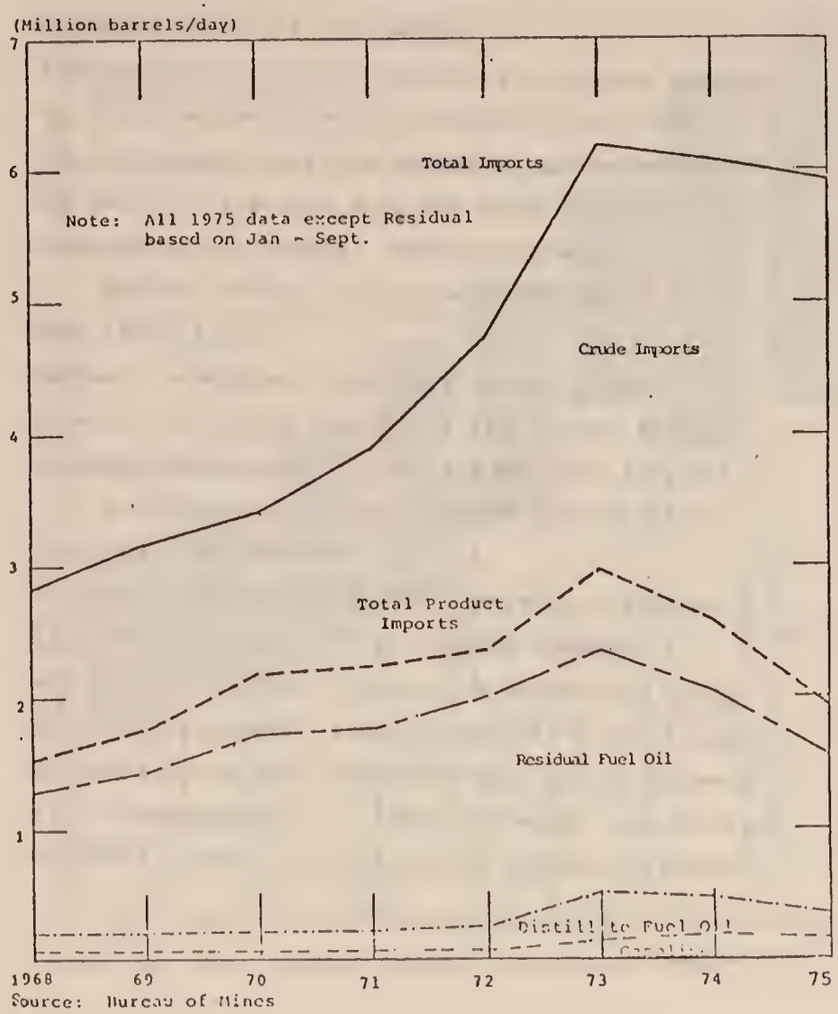
The total national supply of middle distillates (domestic production plus imports) increased 16 percent from 1968 to 1975 (see Figure III-3), although supply deviated from the historical trend by rising sharply in 1973 and declining markedly during 1974 and 1975. The cold winter of 1972-73 caused imports of middle distillates to reach a record high even though domestic production for that year was also a record high.

The regional supply of middle distillates (see Figure III-5) indicates that PADs II and III are the major producers, while Figure III-2 has shown that PADs I and II are the major consumers of middle distillates. More of the demand is satisfied by imports in PAD I than in other districts.

Analysis of allocation and surplus product reports submitted by refiners offers strong evidence that supplies are presently adequate to meet demand. First, the national allocation fraction (i.e., the adequacy of major middle distillate suppliers' available product to meet their

CRUDE AND PRODUCT IMPORTS 1968-1975

FIGURE III-4

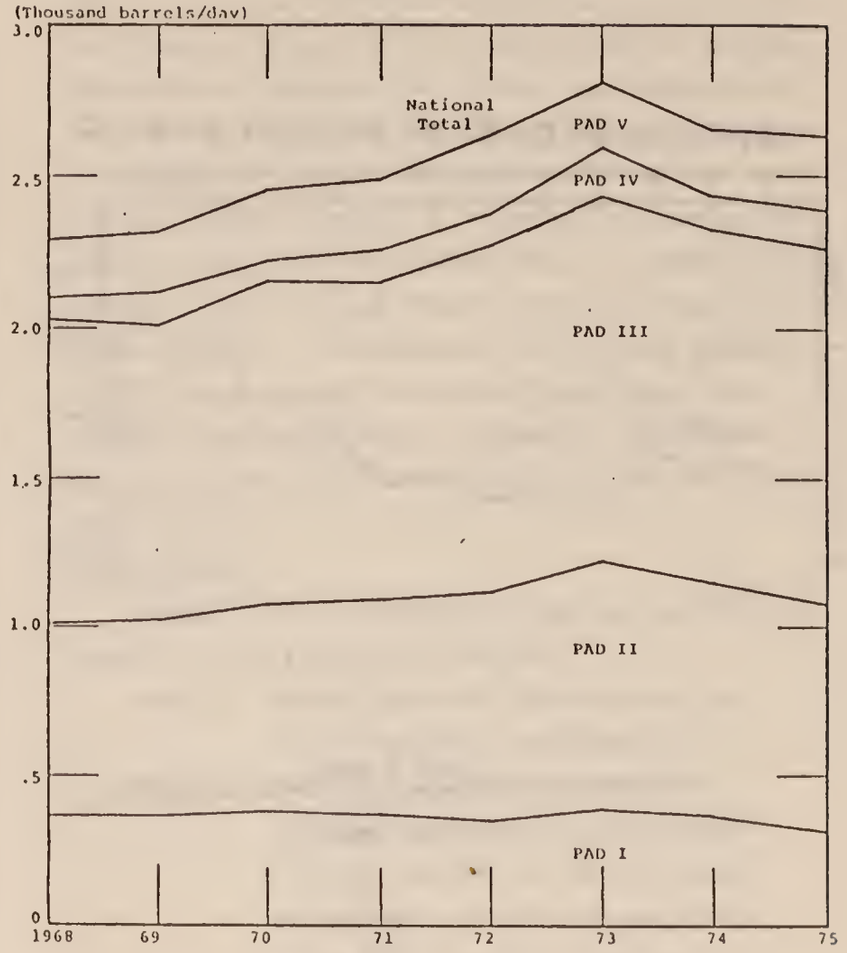



Source: Bureau of Mines



MIDDLE DISTILLATES SUPPLY BY PAD 1968-1975

FIGURE III-5




Source: Bureau of Mines, FEA

customers' allocation entitlements) indicates a normal (i.e., approximately 1.0) supply situation. The fraction reached a low of 0.87 in February 1974 (the most severe point of the embargo), recovered to 0.97 by March 1974, and generally remained close to 1.0 through the end of 1975 (see Figure III-6). This supply adequacy is verified by the surplus product* declared in supplier reports for the past year.

Projections of refinery capacity utilization also indicate adequate supply. In 1974 and 1975, refinery capacity utilization declined to 83.1 percent and 85.7 percent, respectively, from 89.8 percent in 1973 (see Figure III-7).

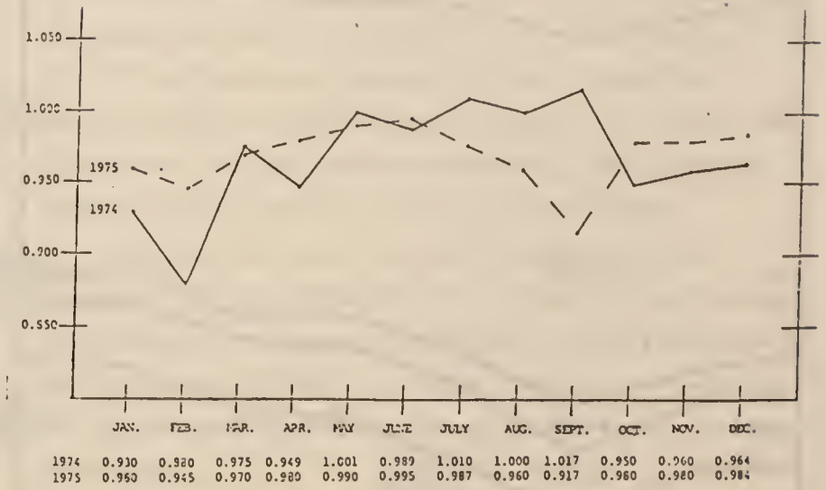
Optimal capacity utilization is considered to be approximately 90 percent. Domestic refinery capacity has generally kept pace with the demand for distillates and is currently more than adequate. The existence of excess refinery capacity, surplus product, and high allocation fractions document that current supplies of middle distillate are adequate.

*Under FEA allocation regulations, surplus product is defined as product in excess of the amount of the supplier's obligations to his base period purchasers, or product not actually lifted by those purchasers.



FIGURE III-6

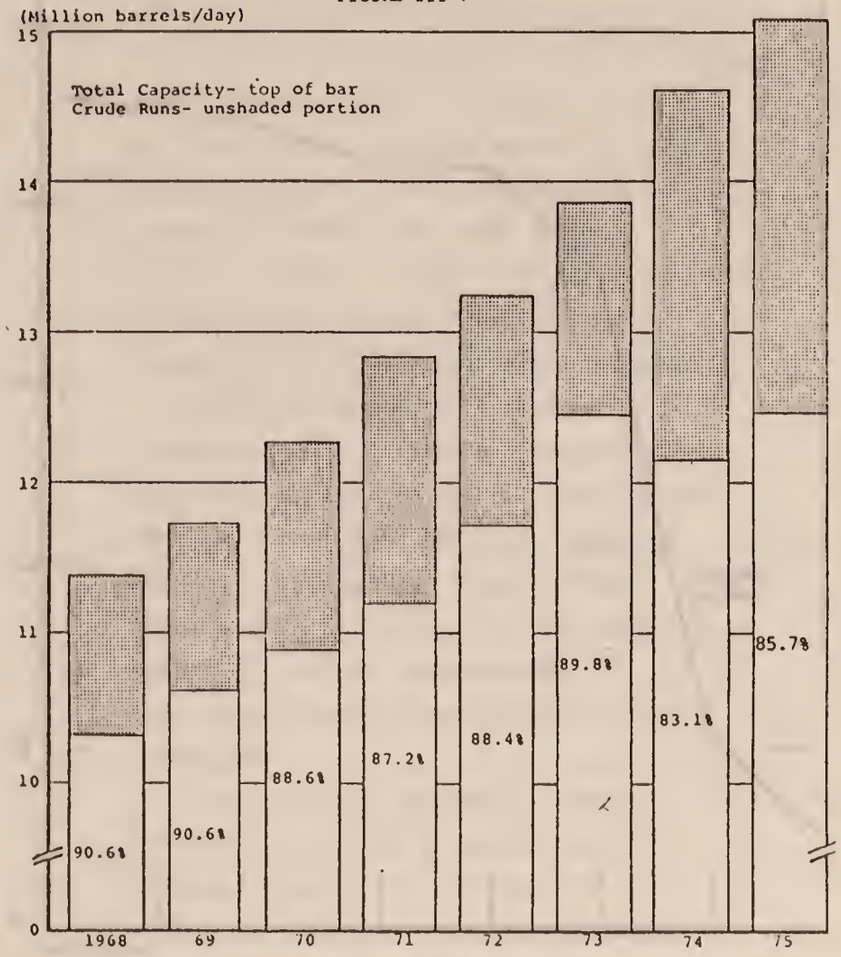
ALLOCATION FRACTIONS FOR MIDDLE DISTILLATES
(1974 & 1975)




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1974 | 0.930 | 0.880 | 0.975 | 0.949 | 1.001 | 0.989 | 1.010 | 1.000 | 1.017 | 0.950 | 0.960 | 0.964 |
| 1975 | 0.960 | 0.945 | 0.970 | 0.980 | 0.990 | 0.995 | 0.987 | 0.960 | 0.917 | 0.980 | 0.980 | 0.984 |

REFINERY CAPACITY AND CRUDE RUNS-PERCENT OF UTILIZATION.

FIGURE III-7




Source: FEA Trends in Refinery Capacity & Utilization, December, 1975.



PRICE AND MARGIN TRENDS

This section traces middle distillates price trends for the period 1968-1975 and examines gross margins for the refining/distribution and retailing segments of the petroleum industry. While price controls are recognized as a major factor influencing the price of middle distillates, other important factors are considered. From 1968 to 1975 the U.S. economy underwent a recession, experienced high levels of inflation and operated under four phases of price controls. Each of these three factors had an important impact on prices, gross margins, and operating profits. To the extent possible, given data limitations, this section considers the extent to which price controls have restrained profits and created pressures for future price increases.

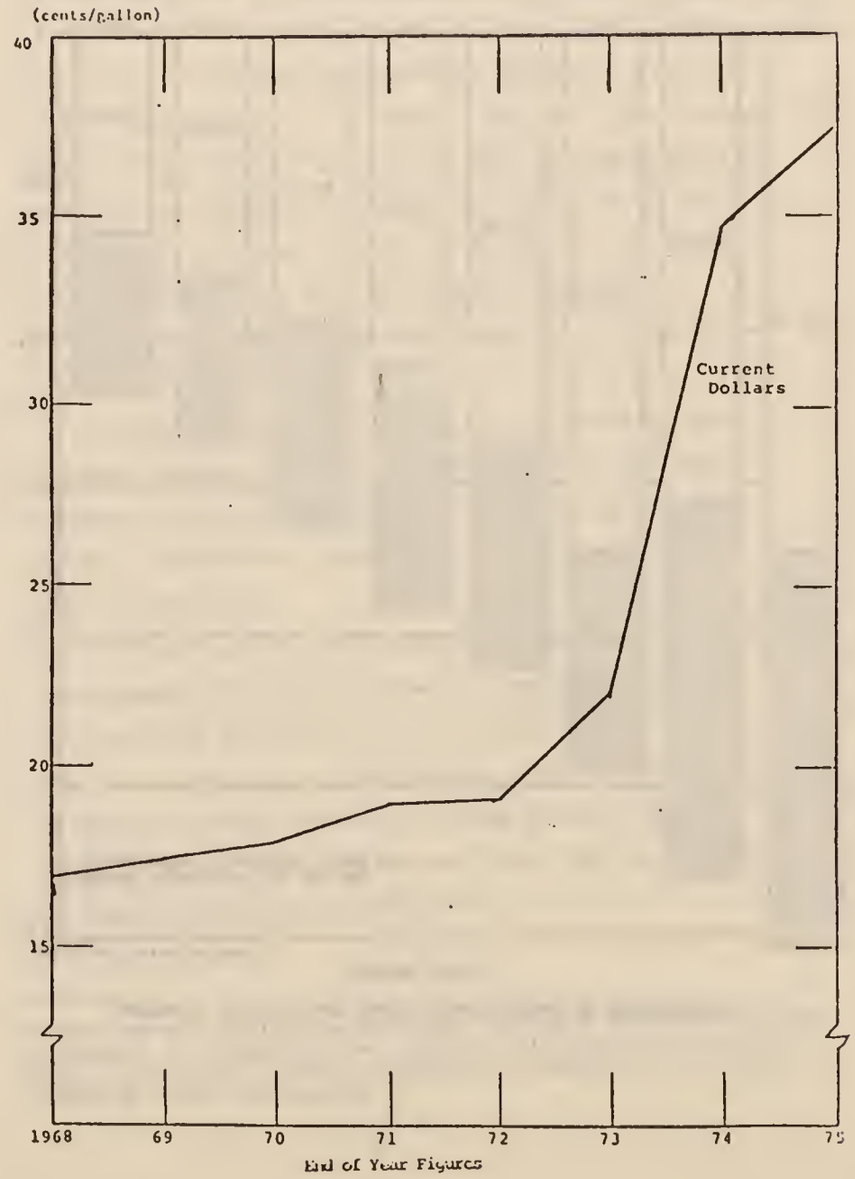
PRICE TRENDS

Trends in middle distillate prices can be traced in terms of the four phases of controls:

Phase I: Average prices for home heating oil (which represents approximately 50 percent of total middle distillate consumption) increased approximately 6 percent during 1970, to 19.0 cents per gallon by 1971 (see Figure III-8). Prices were frozen at a seasonally

Average Heating Oil Prices 1968-1975

FIGURE III-8




Source: Bureau of Labor Statistics, ITA



low level in August 1971 (summer is a low demand period), when Phase I controls were instituted. Thus, Phase I impeded the normal seasonal movement of middle distillate prices.

Phase II: Phase II controls were in effect throughout 1972. Middle distillate prices exceeded their 1971 levels only slightly during this period.

Phase III: Phase III controls contributed to a leveling of prices in the early months of 1973. However, prices increased rapidly in the Spring, giving rise to complaints of inequitable distribution of petroleum products. In particular, complaints were filed by retail dealers, jobbers, and independent marketers alleging unfair pricing practices on the part of their suppliers.

Phase IV: Phase IV controls, introduced in August 1973, were still in effect at the time of the embargo. The cost of crude oil to U.S. refiners more than doubled, rising from an average of 9.6 cents per gallon in August to 20.4 cents per

gallon in February 1974 as the cost of crude oil inputs to domestic refineries rose. Under the Phase IV cost pass-through provision, this cost increase was permitted to be passed on to consumers on a dollar-for-dollar basis, causing middle distillate prices to rise by nearly the same amount -- 10.8 cents per gallon. Thus, despite Phase IV's control of middle distillates prices and only slight increases in distributing gross margins, prices increased significantly simply because of crude oil price increases.

Phase IV controls were ineffective in counteracting the "cost push" forces that were causing prices to spiral. The controls were limited in their impact on cost-push factors largely because they permitted product cost pass-through and were unable to control the cost of imported crude oil even though domestic crude prices were controlled.

The 70 percent increase in middle distillate prices and 6.9 percent decline in demand from 1973 to 1975 indicate that middle distillates are essential products



that are largely price-inelastic in the range of prices experienced. Thus, the relatively inelastic demand for middle distillate products in spite of price increases has largely supported the continued upward movement of prices.

MARGIN TRENDS

Gross margin expressed on a per unit (gallon or barrel) basis is defined as follows:

Refiner/distributor gross margin = refiner/distributor selling price minus cost of crude oil into the refinery

Thus, the gross margin represents the difference between the particular industry sector's purchase price and subsequent selling price of petroleum. This difference is a measure of the amount of revenue available to cover all costs other than costs of goods sold, and to cover profits. Gross margins are discussed in this chapter in the context of their historical movement and the pressures that movement has placed on prices from 1968 to 1975. The effect of current gross margins on future prices will be discussed in Chapter IV.

Refiner/Distributor Margin

An awareness of the trend in refiner/distributor gross margins for all refined products is useful in understanding middle distillates prices. The gross margin trend for all refined products (depicted in Figure III-9) was determined using a mixed barrel of motor gasoline, No. 2 distillate, jet fuel, and residual fuel. These four products represent more than 80 percent of all refined products sales. The actual mixed barrel prices and gross margins are shown in Table III.

TABLE III

| | Average Mixed Barrel Price | Average Crude Cost | Refiner/Distributor Gross Margin |
|---|---|---|---|
| | (all figures are in dollars per barrel) | | |
| 1968 | $ 5.13 | $ 3.17 | $ 1.96 |
| 1969 | 5.24 | 3.29 | 1.95 |
| 1970 | 5.41 | 3.40 | 2.01 |
| 1971 | 5.85 | 3.60 | 2.25 |
| 1972 | 5.75 | 3.58 | 2.17 |
| 1973 | 6.73 | 4.15 | 2.58 |
| 1974 | 11.92 | 9.07 | 2.85 |
| 1975 | 14.02* | 11.05* | 2.97* |

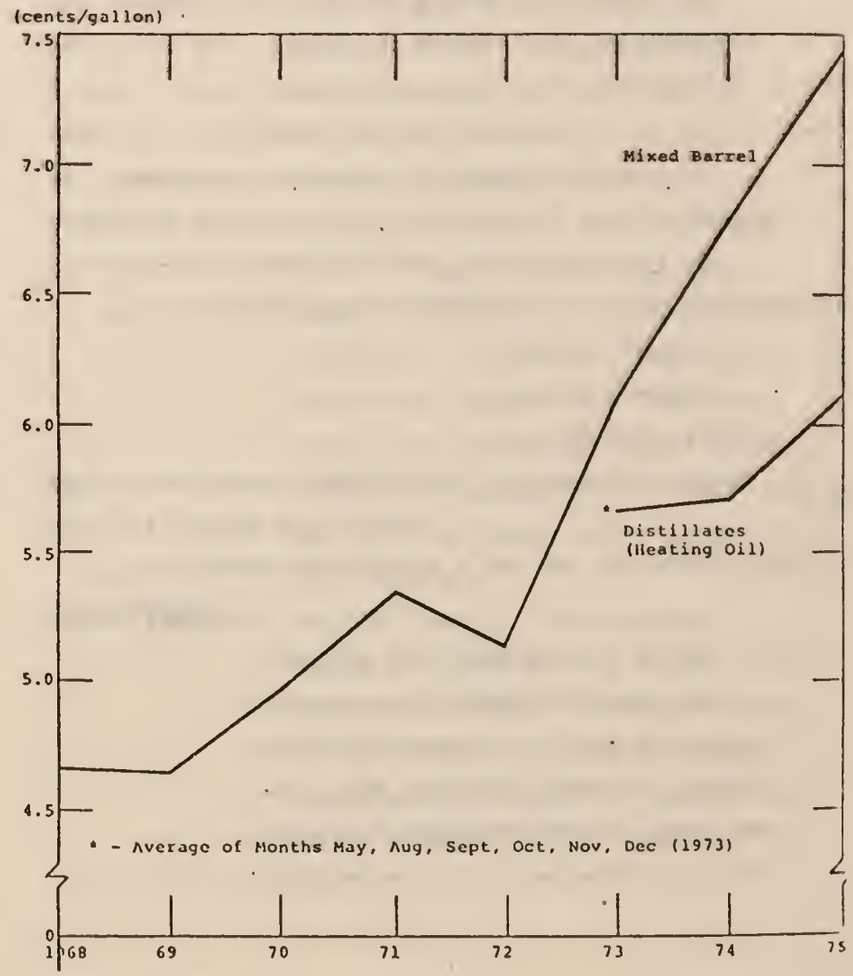
* Represents November 1975 Prices

SOURCE: Mandatory Reports (FEO-96) submitted to FEA, Bureau of Mines, Platt's Oilgram and Lundberg Survey Inc.



Refiner/Distributor Heating Oil Gross Margin 1968-1975

FIGURE III-9




Source: FEA, BOM, and Platt's Oilgram

As indicated in Figure III-9, gross margins were relatively stable during the period 1968-1972, including the period the period 1973-1975, however, gross margins increased considerably, which may be attributed to the effect of of inflation on operating costs of refiners and distributors.

Gross margins for No. 2 heating oil, which constitutes 48 percent of middle distillate consumption, also increased during the period of 1973-1975 but at a slower rate than did all petroleum production as shown in Figure III-9. FEA data on gross margins prior to May 1973 are not available, thus limiting a complete review of historical gross margins for middle distillates.

The fact that gross margins for the refiner/distributor segment of the industry have increased rapidly in the last two years does not represent a direct measure of the profitability of the industry during these periods. To determine profitability, the additional factors of operating costs, volume, and investment levels for the refiners, distributors and retailers must be considered. The projected effects of current refiner/distributor gross margins on future middle distillate prices will be the subject of discussion in Chapter IV.



MARKET STRUCTURE

This section addresses the question of whether market forces and competition in middle distillate refining and marketing are adequate to preserve the competitive viability of independent refiners and marketers, and thereby ensure consumers an adequate supply of middle distillates at equitable prices following exemption of middle distillates from regulation.

Recent trends indicate that independent refiners and independent marketers of middle distillates are increasing their market share. This section discusses this trend in detail by:

- Describing the consumers and distribution system for middle distillates,
- Briefly tracing the market structure of the refining and marketing segments before the period of allocation and price controls, and
- Examining the changes in market share experienced by different classes of refiners and marketers during the period of controls.

Consumers and Distribution System

Home and commercial heating oil (primarily No. 2 fuel oil) and "on-highway" diesel fuel accounted for 67 percent of the national demand for middle distillates in 1974. The other principal uses of middle distillates were: agriculture and construction, 4 percent; railroads, 9 percent; electric utilities, 7 percent; industrial equipment, 7 percent; vessels, 2 percent; and, military and miscellaneous, 4 percent.

The regional distribution of distillate fuel oil is depicted by U.S. Bureau of Census regions in Table IV and Figure III-10. Regional boundaries are indicated in Figure III-11. As these data indicate, end-use market demand varies regionally. Heating represents the major middle distillates demand market in the Northeast and the North Central states, and diesel fuel and other forms of transportation represent the major middle distillates demand markets in the South and West.

Middle distillates move through a complex system of pipelines, trucks, and intermediate storage facilities operated by refiners, terminal operators, distributors, and other retail dealers. At each level in this system, some facilities are owned or controlled by major or independent refiners, while others are owned and operated by independent (non-refiner) marketers, both branded and nonbranded.



TABLE IV

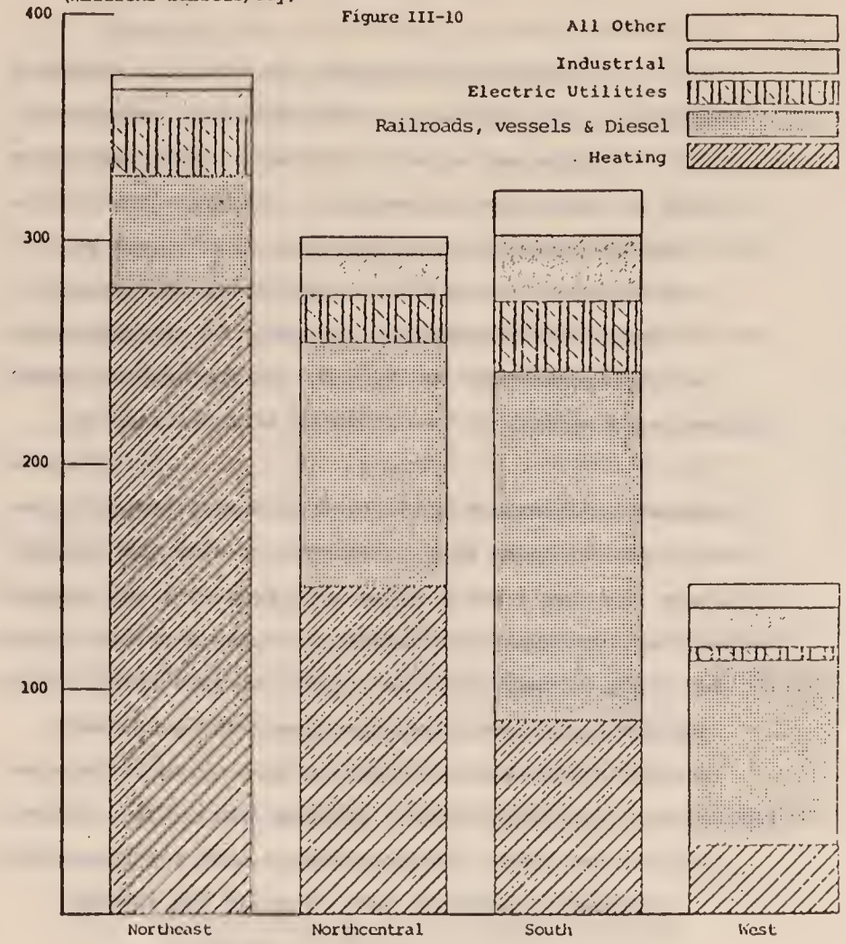
Middle Distillate Fuel Oil Sales by Class of Use Within Census Regions 1974

| END-USE | CENSUS REGION | | | | |
|---|---|---|---|---|---|
| | North East | North Central | South | West | Total U.S. |
| Heating | 24.4% | 12.8% | 7.6% | 2.6% | 47.5% |
| "On-Highway" Diesel | 2.9 | 5.5 | 7.1 | 3.7 | 19.2 |
| "Off-Highway" Diesel | 0.5 | 1.0 | 1.7 | 0.9 | 4.2 |
| Railroads | 0.7 | 2.7 | 3.4 | 2.2 | 9.0 |
| Vessels | 0.3 | 0.2 | 1.3 | 0.3 | 2.1 |
| Utilities | 2.2 | 1.8 | 2.8 | 0.6 | 7.4 |
| Industrial | 1.1 | 1.6 | 2.5 | 1.6 | 6.8 |
| All Other | 0.5 | 0.6 | 1.8 | 0.8 | 3.7 |
| TOTAL | 32.7 | 26.3 | 28.2 | 12.8 | 100.0 |

Source: Bureau of Mines

REGIONAL MIDDLE DISTILLATES
SALES BY CLASS OF USE, 1974
(millions barrels/day)

Figure III-10

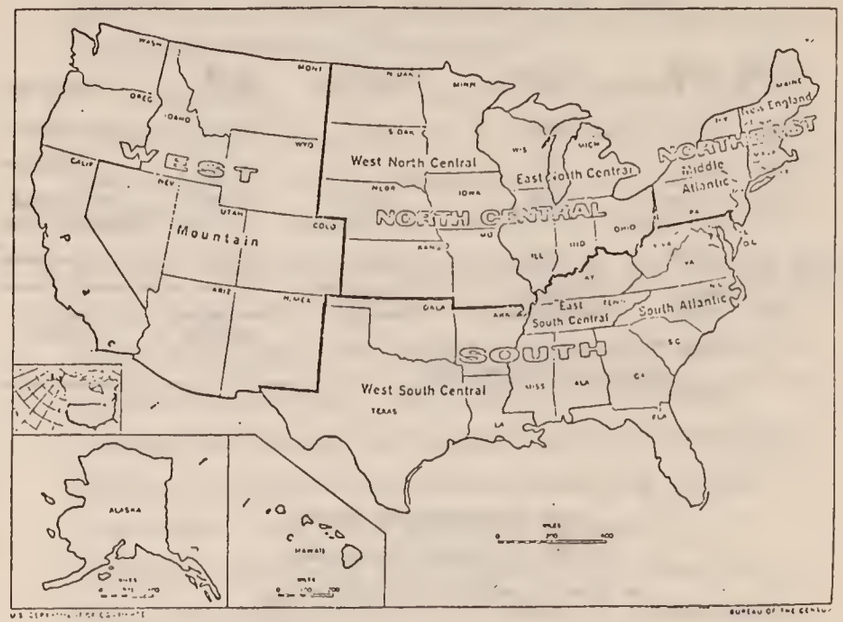



Source: Bureau of Mines



FIGURE III-11

BUREAU OF CENSUS REGIONS



Jobbers buy products from refiners or terminal operators* for sale directly through their own or other dealers. The jobber usually owns his delivery equipment and either owns a bulk storage plant or uses a terminal.

Branded independent marketers operate at both the retail and wholesale levels, selling products under the brand name of a refiner. Nonbranded independent marketers perform the same functions as do branded terminal operators, jobbers, and retail dealers, selling products under their own brand names or supplying other nonbranded independent marketers.

The distribution structure of the middle distillates market varies with the type of end-user involved. As shown in Table V, utilities, industries, and other large-scale accounts, which require large volumes but limited service, are served primarily through direct marketing by refiners. Independent marketers, on the other hand, play a dominant role in the retail distribution of diesel fuel and heating oil to the small consumer, who requires additional services.

* Large-quantity buyers with substantial investments in facilities, such as a river or deepwater port or a pipeline terminal and associated tanks and loading facilities.



TABLE V

Distribution of Marketed Supply of Distillate Fuel Oil by Type of Users and Marketers, 1974

| End-Use Market | Refiner Marketers | Independent Marketers | | | Total |
|---|---|---|---|---|---|
| | | Branded Indep. | Nonbranded Indep. | Total Indep. | |
| Heating | 11.7 | N/A | N/A | 36.0 | 47.7* |
| Diesel/Transportation (1) | 16.5 | N/A | N/A | 18.2 | 34.7 |
| Utility | 6.7 | 0.1 | 0.6 | 0.7 | 7.4 |
| Industrial | 4.9 | 0.4 | 0.8 | 1.2 | 6.1 |
| All Other | 3.6* | 0.2* | 0.2* | 0.5* | 4.1* |
| | 43.4** | 34.1** | 22.5** | 56.5** | 100.0 |

Sources: BOM for total end-use. FEA Fuel Oil Survey (FEA-P-306-S-0) for marketer distribution by end-use.

(1) Includes diesel for on and off-highway uses, railroads and vessel bunkering.

*Estimate based on FEA P306 ratios of marketers for the "other" category applied to BOM product volumes not elsewhere classified.

**Estimate based on the percentage of nonbranded product and branded product supplied to independent marketers by refiners and the direct distillate imports by non-refiners (693 million gallons in 1974). Imports were included with the nonbranded independent sector in calculating these estimates.

Because of the particular importance of space heating and highway use to the middle distillates market, additional discussion of the distribution of these two fuels is warranted:

Heating: The distribution of heating oil is a service business. Besides residential users, other customers for heating oil include apartment houses, office buildings, schools, hospitals, and commercial facilities. Large consumers often purchase at a discount from the refiner or terminal operator, or on a bid basis. In addition to selling oil and providing seasonal maintenance services, many heating oil dealers sell and install new heating and air conditioning equipment.

Approximately 16,000 fuel oil dealers are presently operating in the U.S., according to a recent Dun and Bradstreet listing. In 1974, independent marketers accounted for about 75 percent of total heating oil sales to end-users (see Table V).

Refiners have concentrated their direct marketing in large cities, where they account for about 35 percent of the heating oil market.* As a result of dispersed population and more stringent service requirements, refiners account for only 19 percent of the retail heating oil sales in non-urban areas.

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* FTC, An Evaluation of the Mandatory Petroleum Allocation Program (March 1974)



Refiners also service a higher percentage of large volume commercial and institutional accounts that involve limited service. In 1974, these accounts represented 46 percent of refiners' direct heating oil sales to end-users. In contrast, independent marketers sold 89 percent of their heating oil to residential customers and only 11 percent to commercial accounts (see Table VI) in 1974. Refiner-marketers' commercial sales may be more sensitive to changes in the economy than sales by independent marketers to homeowners.

Diesel Fuel. Diesel fuel is distributed to the transportation sector for use in on-highway trucks, railroads and ships, and to industries for use in stationary diesel engines. Diesel fuel for trucks is marketed in two ways: directly to trucking firms who buy in bulk, store in their own facilities, and fuel their own trucks; and through truck stops, the diesel equivalent of service stations for gasoline. While independent terminal operators serve some bulk consumer accounts, independent marketers generally concentrate on retailing through truck stops. Most truck stops are operated by independent marketers, some branded (i.e., owned or financed by major companies and leased to the operators) and some nonbranded.

TABLE VI

Percent Distribution of Distillate Heating Oil by Refiner Marketers and Independent Marketers, 1974

| | Percent of Heating Oil Sales by Group: | | |
|---|---|---|---|
| Heating Oil Account | Refiner Marketers | Branded Independent Marketers | Nonbranded Independent Marketers |
| Residential | 53.8 | 89.0 | 89.2 |
| Commercial/Institutional | 46.2 | 11.0 | 10.8 |
| Total | 100.0 | 100.0 | 100.0 |

Source: FEA Fuel Oil Survey (FEA P-308-S-0).



Market Structure Before Controls

The middle distillates market was relatively stable from 1968 to 1971. As shown in Table VII, consumption of almost every distillate fuel increased steadily from 1968 into the period of controls. Product supplies were ample, and inventories at year-end fluctuated minimally between a high of 195 million barrels in 1970 and a low of 172 million barrels in 1969.

Domestic prices were also stable, remaining low as a result of potential price competition from abroad (e.g., Italy, the Netherlands). Imports had little effect on the domestic market, varying between 5.5 and 5.8 percent of demand between 1968 and 1971.

This historical situation of abundant supply and low price can be attributed to two major factors: the crude oil market proration laws of the various producing states, and the mandatory import restrictions on products and crude oil imposed in 1959. The market proration laws restricted the amount of domestic crude production to the level that the market could absorb at current prices, effectively ensuring relatively stable unit crude prices. The mandatory import restrictions were instituted to protect the domestic oil production industry from low-cost foreign crude. Under

TABLE VII

MIDDLE DISTILLATE FUEL OIL DOMESTIC DEMAND BY USES

(Thousands of barrels per day)

| | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 |
|---|---|---|---|---|---|---|---|
| HEATING OILS: | 1,395 | 1,402 | 1,427 | 1,431 | 1,484 | 1,471 | 1,350 |
| No. 1 | 148 | 136 | 135 | 135 | 133 | 131 | 110 |
| No. 2 | 1,176 | 1,190 | 1,213 | 1,205 | 1,238 | 1,225 | 1,171 |
| No. 4 | 71 | 76 | 79 | 91 | 113 | 115 | 69 |
| INDUSTRIAL | 125 | 116 | 120 | 139 | 165 | 184 | 175 |
| OIL COMPANY FUEL | 27 | 38 | 32 | 39 | 37 | 41 | 38 |
| ELECTRIC UTILITY | 23 | 33 | 68 | 97 | 187 | 214 | 232 |
| RAILROADS | 230 | 237 | 242 | 236 | 265 | 282 | 281 |
| VESSEL BUNKERING | 50 | 52 | 53 | 57 | 60 | 73 | 66 |
| MILITARY USE | 34 | 38 | 34 | 48 | 55 | 54 | 49 |
| DIESEL TYPE: | 469 | 516 | 534 | 586 | 654 | 759 | 735 |
| On Highway | 339 | 380 | 408 | 457 | 517 | 607 | 602 |
| Off Highway | 130 | 136 | 126 | 129 | 137 | 152 | 133 |
| TOTAL DISTILLATE FUEL | 2,353 | 2,432 | 2,510 | 2,633 | 2,907 | 3,078 | 2,926 |
| Kerosene | 282 | 275 | 262 | 249 | 235 | 216 | 176 |

SOURCE: Bureau of Mines, Sales of Fuel Oil and Kerosine



a foreign crude oil allocation system, "tickets" were issued to each refiner based on his runs. While these tickets could not be sold, they could be and were traded. The price disparity between foreign crude oil and domestic crude oil set a value of $1.00 - $1.25 per barrel on each "ticket." Through the ticket exchange mechanism, inland refiners without historical access to foreign crude were able to obtain cheaper crude. All classes of refiners were thus able to compete equally for available crude oil, foreign or domestic. To maximize the "ticket" flow, however, it became necessary to maximize refinery runs. The result was a readily available supply of middle distillates to all classes of trade.

Although complete data on the middle distillates market structure prior to 1972 are not available, discussions with fuel oil distributors identified two major trends from the late 1940s through the 1960s:

- The number of independent marketers increased rapidly after World War II as new home builders and existing homeowners converted from coal to oil-fired heating systems.
- Major oil companies have occasionally attempted to develop or increase their direct distribution volume to the consumer. However, they were

unable to compete profitably with the local or independent marketers, who were locally established, service-oriented, and therefore more responsive to consumer needs.

It should also be noted that during the post-World War II era gasoline demand grew rapidly and offered an easier market for nationally oriented oil companies to expand their market share than did middle distillates. A residential heating oil consumer does not generally consider shifting to another marketer as readily as he would shift from one retail gasoline station to another.

Market Structure During Controls

During the 1971-1975 period of price controls, the middle distillate market share of independent refiners increased steadily and the share of independent marketers remained or increased in all regions of the the U.S., reflecting the strength of the independent sector of the industry. This section discusses the trends and factors underlying this increase.



Refiners. The Emergency Petroleum Allocation Act (EPAA) defined three types of refiners based on refining capacity and crude oil self-sufficiency ratios. Fifteen large integrated refiners have refining capacities in excess of 175,000 barrels per day and own or control directly more than 30 percent of the crude oil used in their refineries. Four large independent refiners have refining capacities in excess of 175,000 barrels per day and own or control less than 30 percent of the crude oil used in their refineries. Over 100 small refiners have refining capacities of less than 175,000 barrels per day. Most small refiners also own or control less than 30 percent of the crude oil used in their refineries.

The large integrated refiners' market share of middle distillates declined slightly after 1972, the first full year after price controls were instituted, and then declined 1-2 percent by 1975. Conversely, the shares of large independent and small refiners (with the exception of early 1974, when allocation regulations were just taking hold) gradually increased from less than 24 percent to over 25 percent of sales at the refiner level (see Table VIII). Although the allocation and price

TABLE VIII

Refiner Shares of Middle Distillate Sales

| Quarter | Large Integrated Refiners | Large Independent/ Small Refiners | Total Refiner Sales |
|---|---|---|---|
| 1972 1 | 76.1 | 23.9 | 100.0 |
| 2 | 76.5 | 23.5 | 100.0 |
| 3 | 76.1 | 23.9 | 100.0 |
| 4 | 76.3 | 23.7 | 100.0 |
| Annual | 76.2 | 23.8 | 100.0 |
| 1973 1 | 77.1 | 22.9 | 100.0 |
| 2 | 75.5 | 24.5 | 100.0 |
| 3 | 75.3 | 24.7 | 100.0 |
| 4 | 75.8 | 24.2 | 100.0 |
| Annual | 76.3 | 23.7 | 100.0 |
| 1974 1 | 77.4 | 22.6 | 100.0 |
| 2 | 73.2 | 26.8 | 100.0 |
| 3 | 72.1 | 27.9 | 100.0 |
| 4 | 74.5 | 25.5 | 100.0 |
| Annual | 74.6 | 25.4 | 100.0 |
| 1975 (P) | | | |
| 1 | 75.8 | 24.2 | 100.0 |
| 2 | 73.4 | 26.6 | 100.0 |
| 3 | 71.5 | 28.5 | 100.0 |
| 4 | 77.1 | 22.9 | 100.0 |
| Annual | 74.7 | 25.3 | 100.0 |

Source: FEA Refiner Survey (FEA P-305-S-0 & P-306-M-0).
*Percentages may not sum to 100.0 due to rounding
(P) Preliminary estimate



regulations were available during 1974 to preserve the shares of the independent and small refiners, the trends since 1971 indicate that these refiners are able to maintain their market share when they have equal access to a competitively priced crude oil supply.

Other Marketers. Refiners market their middle distillates through the following channels:

- Directly to ultimate consumers through:
  - --large volume consumer accounts (e.g., utilities, railroads, and other industrial accounts) serviced by the refiner
  - --refiner-owned retail facilities operated by salaried or commissioned personnel for the distribution of diesel fuel and/or heating oil
- To branded independent marketers for retail sale by their own dealers, or for distribution to other dealers
- To nonbranded independent marketers for retail sale through their own dealers, or for distribution to other dealers

Table IX presents the changes in market shares of direct and independent marketer distribution channels by type of refiner from 1972 to 1975. The market share trends are shown in more detail by quarter in Table X and Figure III-12. These figures show that the distribution of distillates to independent marketers by refiners follows a seasonal pattern peaking in the first and fourth quarters (winter) of each year. This distribution pattern coincides with the demand for heating oil, the market segment dominated by independent marketers (see Table VI).

There has been a shift since 1972 in refiner marketing away from direct sales to consumers and toward increased distribution through independent marketers. The increase in refiner supplies to independent marketers has been most pronounced among the large integrated refiners. These refiners increased their sales to independent marketers from 52.1 percent of their sales in 1972 to 57.3 percent in 1975 (see Table IX). Large independent and small refiners, on the other hand, have increased their relative distribution of branded product but reduced their supplies of nonbranded product from 38.1 percent of their sales in 1972 to 34.5 percent in 1975.

Nationally, branded independent home heating and diesel marketers of both the large integrated and other



TABLE IX

DISTRIBUTION OF MIDDLE DISTILLATES BY REFINER GROUPS

| | | Percent of Refiner Sales | | | |
|---|---|---|---|---|---|
| Refiner Group | Year | Direct Sales | Branded Product Sold to Independent Marketers | Nonbranded Product Sold to Independent Marketers | Total Sales |
| Large Integrated Refiners | 1972 | 47.8 | 36.9 | 15.2 | 100.0 |
| | 1973 | 46.6 | 38.0 | 15.5 | 100.0 |
| | 1974 | 45.3 | 38.0 | 16.8 | 100.0 |
| | 1975 | 42.6(P) | 39.0 (P) | 18.4 (P) | 100.0 |
| Large Independent /Small Refiners | 1972 | 39.0 | 22.9 | 38.1 | 100.0 |
| | 1973 | 40.3 | 24.1 | 35.6 | 100.0 |
| | 1974 | 39.4 | 24.6 | 36.0 | 100.0 |
| | 1975 | 40.4(P) | 25.2 (P) | 34.4 (P) | 100.0 |
| Total Refiners | 1972 | 45.7 | 33.7 | 20.6 | 100.0 |
| | 1973 | 45.1 | 34.6 | 20.3 | 100.0 |
| | 1974 | 43.8 | 34.6 | 21.6 | 100.0 |
| | 1975 | 42.0(P) | 35.5(P) | 22.5(P) | 100.0 |

Source: FEA Refiner Survey (FEA P-305-S-0 and P-306-M-0)

(P) = Preliminary estimate.

TABLE X

Refiner Distribution of Middle Distillates Direct to End-Users and to Independent Marketers

| Quarter | | Direct Sales to End-Users | Branded Product Sales to Indep-endent Marketers | Nonbranded Product Sales to Indep-endent Marketers | Total Refinder Sales* |
|---|---|---|---|---|---|
| 1972 | 1 | 40.8 | 36.0 | 23.1 | 100.0% |
| | 2 | 49.7 | 31.1 | 19.1 | 100.0 |
| | 3 | 53.7 | 29.2 | 17.1 | 100.0 |
| | 4 | 43.7 | 35.4 | 20.9 | 100.0 |
| Annual | | 45.7 | 33.7 | 20.6 | 100.0 |
| 1973 | 1 | 40.5 | 36.7 | 22.8 | 100.0 |
| | | 49.4 | 33.1 | 17.5 | 100.0 |
| | | 51.6 | 30.8 | 17.6 | 100.0 |
| | | 42.7 | 36.0 | 21.3 | 100.0 |
| Annual | | 45.1 | 34.6 | 20.3 | 100.0 |
| 1974 | 1 | 39.8 | 36.8 | 23.5 | 100.0 |
| | 2 | 47.7 | 31.5 | 20.9 | 100.0 |
| | 3 | 50.2 | 30.3 | 19.5 | 100.0 |
| | 4 | 40 9 | 37.5 | 21.7 | 100.0 |
| Annual | | 43.8 | 34.6 | 21.6 | 100.0 |
| 1975 | 1 (P) | 38.7 | 38.1 | 23.2 | 100.0 |
| | 2 (P) | 44.7 | 33.1 | 22.2 | 100.0 |
| | 3 (P) | 47.7 | 32.1 | 20.1 | 100.0 |
| | 4 (P) | 39.6 | 37.1 | 23.3 | 100.0 |
| Annual | (P) | 42.1 | 35.5 | 22.4 | 100.0 |

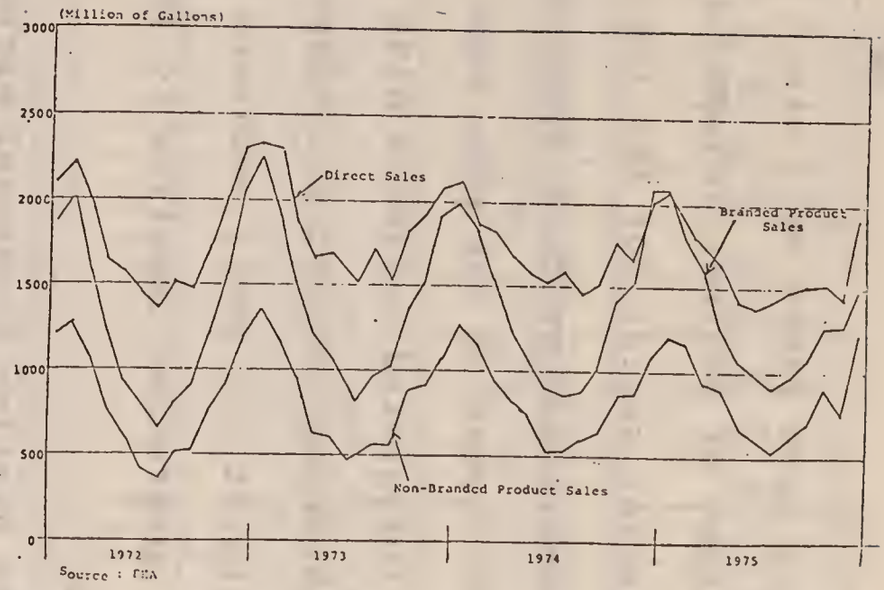
Source: FEA Refiner Survey (FEA P-305-S-0, P-306-M-0).
*Percentages may not sum to 100.0 due to rounding.

(P) = Preliminary estimate.



FIGURE III-12

DISTRIBUTION OF MIDDLE DISTILLATES OF REFINERS



refiners have fared well since 1972. An increasing percentage of refiner volume has gone to this independent sector for the last four years.

Nonbranded product supplies to independent marketers have not grown at the same rate as branded product. While large integrated refiners have increased their supplies of nonbranded product to independents since 1972, large independent and small refiners generally have decreased their nonbranded supplies to independents during the same period.

The decline in direct marketing by refiners has occurred primarily in No. 2 heating oil and diesel fuel oil. For these other fuels, which constitute about 20 percent of total middle distillates sales, refiners increased their direct marketing slightly from 50.8 percent in 1972 to 51.7 percent in 1975. Table XI shows in detail the annual volume and percentage market share of each distribution channel for No. 2 distillate fuel oil and for other middle distillate fuels. Tables XII and XIII show the market shares of the large integrated refiners versus the independent and small refiners, and show that the independent and small refiners increased their share of other middle distillate fuel sales at the refiner level at the expense of large integrated refiners from 1972 to 1975.

# TABLE XI

## TOTAL REFINERS

| PRODUCT | YEAR | SALES DISTRIBUTION (volume in millions of gallons) | | | | | | | PERCENT TOTAL REFINER SALES REPRESENTED BY GROUP |
|---|---|---|---|---|---|---|---|---|---|
| | | DIRECT SALES (CONSUMER ACC'TS) (a) | BRANDED PRODUCT SALES: THROUGH REFINER OPERATED OUTLETS (b) | BRANDED PRODUCT SALES: TO BRANDED INDEPENDENT MARKETERS: RETAIL DEALERS (c) | BRANDED PRODUCT SALES: TO BRANDED INDEPENDENT MARKETERS: JOBBERS (d) | NONBRANDED PRODUCT SALES TO INDEPENDENT MARKETERS (e) | TOTAL SALES TO BRANDED & NONBRANDED INDEPENDENT MARKETERS (c)+(d)+(e) (f) | TOTAL* (a)+(b)+(f) | |
| OTHER MIDDLE DISTILLATES | 1972 | 4,059<br>47.7 | 248<br>2.9 | 403<br>4.8 | 2,321<br>27.4 | 1,441<br>17.0 | 4,170<br>49.2 | 8,427<br>100% | 100 |
| | 1973 | 3,575<br>42.5 | 242<br>3.0 | 399<br>4.8 | 2,267<br>27.2 | 1,548<br>18.6 | 4,214<br>50.5 | 8,338<br>100% | 100 |
| | 1974/ | 3,613<br>47.6 | 224<br>2.9 | 363<br>4.7 | 2,153<br>27.7 | 1,403<br>18.1 | 3,924<br>50.6 | 7,762<br>100% | 100 |
| | 1975 | 3,419<br>49.2 | 174<br>2.5 | 349<br>5.0 | 1,852<br>26.5 | 1,163<br>16.9 | 3,353<br>48.3 | 6,945<br>100% | 100 |
| NO. 2 DISTILLATE FUEL OIL (Heating & Diesel) | 1972 | 16,696<br>43.2 | 535<br>1.4 | 2,257<br>5.8 | 10,870<br>28.2 | 8,278<br>21.4 | 21,405<br>55.4 | 38,636<br>100% | 100 |
| | 1973 | 17,141<br>42.8 | 564<br>1.4 | 2,627<br>6.6 | 11,476<br>28.6 | 8,265<br>20.6 | 22,368<br>55.8 | 40,073<br>100% | 100 |
| | 1974 | 16,395<br>41.3 | 553<br>1.4 | 2,506<br>6.3 | 11,321<br>28.7 | 8,817<br>22.3 | 22,644<br>57.3 | 39,592<br>100% | 100 |
| | 1975 | 15,094<br>38.8 | 617<br>1.6 | 2,112<br>5.4 | 12,005<br>30.8 | 9,115<br>23.4 | 23,232<br>59.7 | 38,943<br>100% | 100 |
| TOTAL MIDDLE DISTILLATE | 1972 | 20,756<br>44.0 | 783<br>1.7 | 2,665<br>5.7 | 13,191<br>28.0 | 9,719<br>20.6 | 25,575<br>54.3 | 47,104<br>100% | 100 |
| | 1973 | 21,016<br>43.4 | 813<br>1.7 | 3,028<br>6.3 | 13,743<br>28.4 | 9,813<br>20.3 | 26,587<br>55.0 | 48,413<br>100% | 100 |
| | 1974 | 19,920<br>42.2 | 776<br>1.6 | 2,869<br>6.1 | 13,474<br>28.5 | 10,225<br>21.6 | 26,568<br>56.2 | 47,264<br>100% | 100 |
| | 1975 | 18,512<br>40.3 | 791<br>1.7 | 2,460<br>5.4 | 13,817<br>30.2 | 10,279<br>22.4 | 26,555<br>57.9 | 45,933<br>100% | 100 |

* Numbers may not sum to total due to rounding

# TABLE XII

## LARGE INTEGRATED REFINERS

| PRODUCT | YEAR | SALES DISTRIBUTION (volume in millions of gallons) | | | | | | | PERCENT TOTAL REFINER SALES REPRESENTED BY GROUP |
|---|---|---|---|---|---|---|---|---|---|
| | | DIRECT SALES (CONSUMER ACC'TS) (a) | BRANDED PRODUCT SALES: THROUGH REFINER OPERATED OUTLETS (b) | BRANDED PRODUCT SALES: TO BRANDED INDEPENDENT MARKETERS: RETAIL DEALERS (c) | BRANDED PRODUCT SALES: TO BRANDED INDEPENDENT MARKETERS: JOBBERS (d) | NONBRANDED PRODUCT SALES TO INDEPENDENT MARKETERS (e) | TOTAL SALES TO BRANDED & NONBRANDED INDEPENDENT MARKETERS (c)+(d)+(e) (f) | TOTAL* (a)+(b)+(f) | |
| OTHER MIDDLE DISTILLATES | 1972 | 2 990<br>52.4 | 7<br>0.1 | 105<br>1.8 | 1 858<br>32.6 | 747<br>13.1 | 2.710<br>47.5 | 5 707<br>100% | 67.3 |
| | 1973 | 2,784<br>49.7 | 7<br>0.1 | 106<br>1.9 | 1 883<br>33.6 | 823<br>14.7 | 2 812<br>50.2 | 5,603<br>100% | 67.2 |
| | 1974 | 2,406<br>49.7 | 6<br>0.1 | 98<br>1.8 | 1 535<br>32.7 | 761<br>15.7 | 2 434<br>50.2 | 4,436<br>100% | 62.4 |
| | 1975 | 2,097<br>49.7 | 24<br>0.6 | 95<br>2.3 | 1,450<br>34.4 | 551<br>13.1 | 2.096<br>49.7 | 4 217<br>100% | 60.7 |
| NO. 2 DISTILLATE FUEL OIL (Heating & Diesel) | 1972 | 14 069<br>46.6 | 101<br>0.3 | 1.504<br>5.0 | 9 836<br>32.7 | 4 707<br>15.6 | 16.037<br>53 1 | 30 206<br>100% | 78.2 |
| | 1973 | 14.275<br>45.6 | 125<br>0.4 | 1 769<br>5.7 | 10,242<br>32.7 | 4 900<br>15 6 | 16,911<br>54.0 | 31 311<br>100% | 78.1 |
| | 1974 | 13,402<br>44.0 | 156<br>0.5 | 1,667<br>5 5 | 10 045<br>33.0 | 5 154<br>17.0 | 16 876<br>55.5 | 30 434<br>100% | 77.0 |
| | 1975 | 12.289<br>40.9 | 216<br>0.7 | 1 337<br>4.4 | 10,503<br>34.9 | 5,730<br>19.1 | 17 576<br>58.4 | 30 081<br>100% | 77.2 |
| TOTAL MIDDLE DISTILLATE | 1972 | 17.059<br>47.5 | 108<br>0.3 | 1,609<br>4.4 | 11,694<br>32.5 | 5,454<br>152 | 18 747<br>52.1 | 35 913<br>100% | 76.2 |
| | 1973 | 17,059<br>46.2 | 132<br>0.4 | 1,875<br>5.1 | 12,125<br>32.9 | 5,723<br>15 5 | 19 723<br>53.5 | 36 914<br>100% | 76.2 |
| | 1974 | 15,808<br>44.9 | 162<br>0.5 | 1 765<br>5.0 | 11,630<br>33.0 | 5 915<br>16 8 | 19 310<br>54 9 | 35 280<br>100% | 75.6 |
| | 1975 | 14,386<br>41.9 | 240<br>0.7 | 1,432<br>4.2 | 11,959<br>34.9 | 6 281<br>18 3 | 19.672<br>57.3 | 34 298<br>100% | 74.7 |

* Numbers may not sum to total due to rounding

# TABLE XIII

## OTHER REFINERS

| PRODUCT | YEAR | SALES DISTRIBUTION (volume in millions of gallons) | | | | | | | PERCENT TOTAL REFINER SALES REPRESENTED BY GROUP |
|---|---|---|---|---|---|---|---|---|---|
| | | DIRECT SALES (CONSUMER ACC'TS) (a) | BRANDED PRODUCT SALES: THROUGH REFINER OPERATED OUTLETS (b) | BRANDED PRODUCT SALES: TO BRANDED INDEPENDENT MARKETERS: RETAIL DEALERS (c) | BRANDED PRODUCT SALES: TO BRANDED INDEPENDENT MARKETERS: JOBBERS (d) | NONBRANDED PRODUCT SALES TO INDEPENDENT MARKETERS (e) | TOTAL SALES TO BRANDED & NONBRANDED INDEPENDENT MARKETERS (c)+(d)+(e) (f) | TOTAL* (a)+(b)+(f) | |
| OTHER MIDDLE DISTILLATES | 1972 | 1,069<br>38.6 | 241<br>8.7 | 303<br>10.9 | 463<br>16.7 | 694<br>25.1 | 1,460<br>52.7 | 2,770<br>100% | 32.7 |
| | 1973 | 1,091<br>39.9 | 242<br>8.9 | 293<br>10.7 | 384<br>14.0 | 725<br>26.5 | 1,402<br>51.3 | 2,735<br>100% | 32.8 |
| | 1974 | 1,208<br>41.4 | 218<br>7.5 | 275<br>9.4 | 568<br>19.5 | 647<br>22.2 | 1,490<br>51.1 | 2,916<br>100% | 37.6 |
| | 1975 | 1,321<br>48.4 | 150<br>5.5 | 253<br>9.3 | 392<br>14.4 | 612<br>22.4 | 1,257<br>46.1 | 2,728<br>100% | 39.3 |
| NO. 2 DISTILLATE FUEL OIL (Heating-Diesel) | 1972 | 2618<br>31.1 | 434<br>5.2 | 753<br>8.9 | 1044<br>12.4 | 3,571<br>42.4 | 5,368<br>63.8 | 8,420<br>100% | 21.8 |
| | 1973 | 2866<br>32.7 | 439<br>5.0 | 868<br>9.8 | 1214<br>14.1 | 3,365<br>38.4 | 5,457<br>62.3 | 8,762<br>100% | 21.9 |
| | 1974 | 2,903<br>32.0 | 397<br>4.4 | 829<br>9.1 | 1276<br>14.1 | 3,663<br>40.4 | 5,768<br>63.6 | 9,068<br>100% | 23.0 |
| | 1975 | 2,805<br>31.7 | 401<br>4.5 | 775<br>8.8 | 1,496<br>16.9 | 3,385<br>38.2 | 5,656<br>63.8 | 8,862<br>100% | 22.8 |
| TOTAL MIDDLE DISTILLATE | 1972 | 3,688<br>33.0 | 675<br>6.0 | 1,056<br>9.4 | 1,507<br>13.5 | 4,265<br>38.1 | 6,828<br>61.0 | 11,191<br>100% | 23.8 |
| | 1973 | 3,957<br>34.4 | 681<br>5.9 | 1,153<br>10.0 | 1,618<br>14.1 | 4,090<br>35.6 | 6,861<br>59.7 | 11,499<br>100% | 23.8 |
| | 1974 | 4,112<br>34.3 | 614<br>5.1 | 1,104<br>9.2 | 1,844<br>15.4 | 4,310<br>36.0 | 7,258<br>60.6 | 11,984<br>100% | 25.4 |
| | 1975 | 4,126<br>35.6 | 551<br>4.8 | 1,028<br>8.9 | 1,888<br>16.3 | 3,997<br>34.6 | 6913<br>59.7 | 11,590<br>100% | 24.5 |

* Numbers may not sum to total due to rounding

Part of the relative decline in direct marketing of distillates by refiners can be attributed to the price regulations instituted in 1971. The August 1971 controls affected the relative profitability of different refinery products, causing refiners to shift their refinery yield (until imposition of the Mandatory Petroleum Allocation Regulations) from middle distillates to gasoline and other products. This shift was more pronounced for large integrated refiners than for other refiners.

Price controls also created significant disincentives for the marketing of distillates. The Phase I price freeze limited prices to their August 15, 1971 levels, when gasoline was at its seasonal high price and middle distillates at their seasonal low price. Phase II controls, which were in effect from 1971 until January 1973, allowed oil companies to allocate cost increases between product lines provided that their average cost increases were below 2 percent. As a result, the petroleum companies did not have enough flexibility to adjust the price of distillates to seasonally higher prices during the 1972-1973 heating season, a factor which aggravated that winter's heating oil shortage.

The decline in direct refiner marketing since 1972 can also be partially attributed to valid competitive trends. Refiners, especially the large integrated refiners,



had been withdrawing from the home heating oil market for a number of years because they were unable to market that fuel and serve the customers as effectively as could their independent competitors.

Overall U.S. market share trends were reflected in each region of the country, but were more pronounced in the North Central and Southern regions in 1975. Table XIV shows direct refiner and independent marketer market shares and Table XV shows actual gallonage sales by region for the period 1972-1975.

One region - the Northeast - relies more heavily on middle distillate imports than do the other regions (consuming almost all the middle distillates imported, which account for less than 5 percent of total U.S. middle distillate consumption). Consequently, independent marketers in the Northeast include a number of important terminal operators and jobbers. When competitively priced domestic supplies became less available starting in 1973, Northeastern independent marketers were forced to purchase higher-priced imported product; consequently, their market share position was somewhat weaker than that of independent marketers in other regions. However, the middle distillate

TABLE XIV

Regional Market Shares of Refiner and Independent Marketers of Distillate Fuel Oil

| Census Region | Year | Refiner Sales | Independent Marketer Sales | Total |
|---|---|---|---|---|
| Northeast | 1972 | 27.7 | 72.3 | 100.0 |
| | 1973 | 27.6 | 72.4 | 100.0 |
| | 1974 | 28.3 | 71.7 | 100.0 |
| | 1975 | 25.2(P) | 74.8(P) | 100.0 |
| North Central | 1972 | 53.7 | 46.3 | 100.0 |
| | 1973 | 51.7 | 48.3 | 100.0 |
| | 1974 | 52.5 | 47.5 | 100.0 |
| | 1975 | 45.1(P) | 54.9(P) | 100.0 |
| South | 1972 | 51.8 | 48.2 | 100.0 |
| | 1973 | 49.0 | 51.0 | 100.0 |
| | 1974 | 50.9 | 49.1 | 100.0 |
| | 1975 | 43.9(P) | 56.1(P) | 100.0 |
| West | 1972 | 61.9 | 38.1 | 100.0 |
| | 1973 | 59.4 | 40.6 | 100.0 |
| | 1974 | 61.6 | 38.4 | 100.0 |
| | 1975 | 58.3(P) | 41.7(P) | 100.0 |

NOTE: 1975 figures are preliminary. The direction of the change is believed to be correct. The magnitude of the change, however, appears unusually high and further verification is necessary.



TABLE XV

Regional Middle Distillate Sales to End-Users by Refiner and Independent Marketers (Millions of Gallons)

| Census Region | Year | Refiner Marketers | Independent Marketer | Sales to Consumers Total |
|---|---|---|---|---|
| Northeast | 1972 | 4,782 | 12,495 | 17,277 |
| | 1973 | 4,644 | 12,191 | 16,835 |
| | 1974 | 4,438 | 11,238 | 15,676 |
| | 1975(P) | 3,710 | 11,035 | 14,745 |
| North Central | 1972 | 7,200 | 6,211 | 13,411 |
| | 1973 | 6,814 | 6,371 | 13,185 |
| | 1974 | 6,622 | 5,983 | 12,605 |
| | 1975(P) | 5,527 | 6,737 | 12,264 |
| South | 1972 | 6,441 | 5,998 | 12,439 |
| | 1973 | 6,882 | 7,152 | 14,034 |
| | 1974 | 6,896 | 6,646 | 13,542 |
| | 1975(P) | 6,100 | 7,835 | 13,935 |
| West | 1972 | 3,673 | 2,261 | 5,934 |
| | 1973 | 4,008 | 2,739 | 6,747 |
| | 1974 | 3,794 | 2,361 | 6,155 |
| | 1975(P) | 3,534 | 2,421 | 5,955 |

SOURCE: Refiner Marketer Sales - FEA Fuel Oil Survey (P308-S-0) and FEA Refiner Survey (P308-M-0); Total Sales to Consumers - BOM, Sales of Fuel Oil and Kerosine; Independent Marketer Sales - estimated as "Total Sales" - "Refiner Marketer Sales."

P = Preliminary estimate. Ethyl Corporation data used to estimate "Total Sales to Consumers" for 1975.

supply situation stabilized during 1974, with imports falling below 1973 levels and continuing to fall in 1975. Presently, independent marketers in the Northeast are able to obtain adequate supply at a competitive price.

In summary, in view of the present adequate supply, independent and small refiners appear able to compete effectively with the large integrated refiners and, thus, maintain their market share of middle distillate sales at the refinery level. Secondly, nonrefiner marketers appear able to obtain adequate supplies at competitive prices in all regions. The market position of independent refiners and marketers has continued throughout the period of controls, and allocation and price controls appear not to be needed to preserve their market shares.

SUMMARY OF CONCLUSIONS

This section summarizes the findings on the adequacy of the supply of middle distillates to meet demand and the effects of controls on prices and competition.

Supply/Demand

The following conclusions can be drawn regarding middle distillates supply before and during allocation and price controls:



- o Refinery capacity. With domestic refinery capacity utilization at 85.7 percent in 1975, compared with the pre-embargo average of 88.7 percent, capacity to supply future demand for all refined products, including middle distillates, is more than ample.
- o Stocks. By 1975 stocks of middle distillates had reached a 65-day supply, up from 1972-1973 level of a 53-day supply and are sufficient relative to demand.
- o Supply vs. Demand. The national average allocation fraction has approximated 1.0 since mid-1974, indicating that supply has been, and continues to be adequate to meet demand.

Prices

The major purpose of FEA price controls was to deter any potential price increases that capitalized on shortage conditions. Price controls were thus needed during, and immediately following, the embargo to assure equitable pricing of products. Despite controls, however, middle distillate prices rose dramatically as crude oil cost increases were passed through to the consumer as permitted by the EPAA. Furthermore, margins for the refiner/distributor segment rose under controls for all petroleum products, including middle distillates. However,

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these gross margins are not a direct measure of the profitability of the refiner/distributor segment and increases in gross margins do not necessarily reflect corresponding increases in profit margins. Therefore, some pressure may exist to increase prices following the exemption of middle distillates from the Mandatory Allocation and Price Regulations in order to raise profit margins. The effect of current margins on future middle distillates prices, after exemption, is analyzed in Chapter IV.

Competition

The competitive viability of independent refiners and independent marketers of middle distillates has been maintained throughout the period of controls.

At the refiner level, the small and independent refiners slightly increased their share of middle distillate sales by refiners from 1972 through 1975, indicating that these refiners are able to compete effectively when they have equal access to competitively priced crude oil supplies.

Independent branded and nonbranded marketers increased their market share of middle distillates sales from 54 percent in 1972 to approximately 58 percent in 1975. There was a corresponding decline in direct sales by refiners, especially large integrated refiners.



Although part of this increase in the independents' market share was the result of valid competitive strengths (e.g., local service orientation and responsiveness of independent marketers), some was also the result of profit distortions caused by Phase I and II price controls that tended to shift the refining and marketing emphasis of refiners from middle distillates to other fuels.

In view of large numbers of independent and small refiners and independent marketers now competing successfully in the market, and the gradual drop in direct marketing by large integrated refiners, it is FEA's view that competition in the refining and marketing of middle distillates in all regions of the U.S. is now adequate to protect consumers and will continue to be effective under exemption. The projected increase in U.S. refinery capacity over the next several years should enable marketers in any region to obtain adequate domestic supplies of middle distillates.

CHAPTER IV

## IMPACT OF DECONTROL ON SUPPLY/DEMAND PRICE, AND MARKET STRUCTURE

This chapter considers future demand, supply, price and market structure conditions, and assesses the impact of exempting middle distillates from mandatory allocation and price regulations. The findings required by the EPAA raises the following questions:

- Are middle distillates in adequate supply?
- Will exemption in shortges of any other refined product?
- Will exemption result in inequtable prices for any class of user of middle distillates?
- Will competition and market forces be adequate to protect consumers following an exemption of middle distillates from regulation?
- Is the exemption of middle distillate consistent with the attainment of the objectives of the EPAA?

To answer these questions, the following analytical approach has been taken:

- Demand forecast -- A demand forecast for middle distillates and all refined products was developed for the period 1976-1978.
- Supply forecast -- The availability of refining capacity and crude supply on both a domestic and world wide basis to meet forecasted demand has been evaluated.



- Pricing factors -- The price movement pressures arising from the cost and margins associated with the major industry segments, foreign market prices, and the competitive structure of the industry have been assessed.
- Market structure and competition -- Trends that may affect the future competition of the major industry segments have been examined.
- General Impacts -- Positive benefits to be derived from decontrol have been considered.

Many trends in the industry will continue under either controlled or uncontrolled conditions. For example, rising crude oil prices and increased refiner cost pass-throughs will tend to increase middle distillates prices with or without controls. Accordingly, the discussion in this chapter focuses on the effects resulting solely from exemption of middle distillates.

### DEMAND FORECAST

Demand for middle distillates was forecast using FEA's short-term petroleum demand model.* The forecast was designed to indicate the probable high end of the range of demand, and thereby insure that subsequent analysis of available supply adequacy would be conservative.

* For a general description of the methodology used for the short-term forecasting model, see APPENDIX II.

The key assumption underlying the high demand forecast was that prices of crude oil and middle distillates would not change from their projected values under controls (see Tables XXV and XXVI). GNP growth rate of 5.9 percent for 1977, and 1.2 percent for 1978 were also assumed. The high demand forecast is summarized in Table XVI below:

TABLE XVI

Projected Domestic Petroleum Product
Demand Assuming No Price Increase from Exemption*
(Thousands of Barrels Per Day)

| | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|
| Motor Gasoline | 6.623 | 6,805 | 7.109 | 7,375 |
| Middle Distillates** | 2,918 | 3,123 | 3,342 | 3,386 |
| Residual Fuels*** | 2,540 | 2,534 | 2,538 | 2,541 |
| Other Products | 4,329 | 4,634 | 4,971 | 5,104 |
| Total Domestic Demand | 16,410 | 17,096 | 17,960 | 18,406 |
| Exports & Crude Oil Losses | 216 | 216 | 216 | 216 |
| Total Demand | 16,626 | 17,312 | 18,176 | 18,622 |

*Source: FEA Demand Model (3/12/76). Forecasts are derived from FEA's short-term demand model as revised on 3/12/76. Model does not take into account reductions in demand which may occur as a result of conservation measures. To the extent that future conservation measures reduce demand, these estimates would be overstated.

** Kerosene is included in other products

***These Residual Fuel Oil demand estimates are revised downward from those reported in the FINDINGS AND VIEWS CONCERNING THE EXEMPTION OF RESIDUAL FUEL OIL FROM THE MANDATORY PETROLEUM ALLOCATION AND PRICE REGULATIONS March 29, 1976. FEA's short term demand model was revised March 12, 1976, to make improvements in the methodology and to take into account the latest available data.



Total demand for all products is projected to increase approximately 4 percent during 1976, primarily as a result of the general upswing in U.S. economic activity. Demand increases by 5.1 percent in 1977, again due primarily to a further increase in economic activity. Demand growth in 1978 is projected at only 2.5 percent over 1977, due to a projected slowdown in economic activity. The cumulative rise in demand from 1975 through 1978 is projected to be slightly more than 2 million barrels per day.

TABLE XVII

PRECENTAGE INCREASE IN ANTICIPATED PRODUCT
DEMAND OVER PRIOR YEAR DEMAND

| | 1976 | 1977 | 1978 |
|---|---|---|---|
| Middle Distillates | 7.0% | 7.0% | 1.3% |
| Residual Fuel | -0.2% | 0.2% | 0.1% |
| Jet Fuel | 5.5% | 7.0% | 5.5% |
| Petrochemical Feedstocks | 15.8% | 8.5% | 3.3% |
| Motor Gasoline** | 2.8% | 4.5% | 3.7% |
| Propane** | 11.3% | 5.0% | 1.5% |
| Other Products | 4.9% | 8.2% | 1.7% |
| Domestic Demand* | 4.2% | 5.1% | 2.5% |

Source: FEA Demand Model (3-12-76)

* Excludes export demand

** Preparation of the middle distillates report began in February, 1976. The demand model included the most current information available to the FEA, but no 1976 data were then available.

It is now obvious that 1976 demand increases in motor gasoline (now at about 6 percent) will be much higher than forecast. This appears to result from an improvement in overall economic conditions, generally mild and pleasent spring weather, and bicentennial -- related tourism. We should note that this unusally high demand was not foreseen earlier by the petroleum industry -- which forecast motor gasoline demand at a lower level than did FEA.

Conversely, propane demand is considerably below forecast levels (currently at about 4 percent over 1975).

Demand for middle distillates is projected to increase at a faster rate than demand for petroleum products in general during 1976 and 1977. This projection reflects increased industrial usage of middle distillates resulting from a rise in the general level of economic activity and increased residential usage resulting from general economic growth and rising income. By 1977, middle distillates demand is expected to exceed 3.3 million barrels per day, which is roughly one-half million barrels per day (or 14.6 percent) more than its average level during 1975. A very small decline is projected from 1977 to 1978 due to an anticipated slowdown in the economy.

Demand for motor gasoline is expected to closely follow the anticipated increases in the general level of economic activity: from 1975 through 1976, slightly less than 3 percent; from 1976 to 1977, between 4 and 5 percent; and from 1977 to 1978, slightly less than 4 percent. The total expected rise in demand from 1975 to 1978 is projected at approximately 750,000 barrels per day. The annual growth rate of 3.5 percent during this three-year period is forecast despite a slight decline in demand over the 1974-1975 period. However, there may be a larger than normal seasonal rise in demand during the 1976 high demand period resulting from bicentennial activity. [This is not reflected in FEA's demand projections.]

The projected demand outlook for the remaining fuels exhibits considerable contrast:

- o Demand for residual fuel oil is not expected to change significantly from its 1975 level.



- o Demand for liquefied petroleum gases is expected to rise during 1976 and 1977 at a faster rate than can be attributed to increased economic activity, primarily due to shortages of natural gas and growth of the petrochemical industry.
- o Demand for petrochemical feedstocks is also expected to increase at a faster rate than is the general level of economic activity, reflecting expanding conditions within the petrochemical industry.
- o Demand for jet fuel is expected to follow the rise in economic activity.

The above middle distillates demand projections reflect the most conservative price assumptions for analyzing the potential adequacy of middle distillates supply.

SUPPLY FORECAST

To assess the adequacy of petroleum product supplies relative to forecast demand, the key supply determinants of refinery capacity and crude oil supply were analyzed. The following overall supply forecast was developed (see Table XVIII).

TABLE XVIII

PROJECTED U.S. PETROLEUM SUPPLY
(thousands of barrels per day)

| | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|
| Refinery Capacity* | 14,938 | 15,691 | 16,508 | 17,073 |
| Percent Utilization | 85.7% | 86% | 86% | 86% |
| Anticipated Utilization | 12,847 | 13,494 | 14,197 | 14,683 |
| Domestic Crude | 8,426 | 8,081 | 7,861 | 9,113 |
| Foreign Crude | 3,858 | 5,013 | 5,936 | 5,170 |
| Imported Products | 2,109 | 2,189 | 2,400 | 2,411 |
| Natural Gas Liquids | 1,634 | 1,593 | 1,543 | 1,493 |
| Other** | 599 | 436 | 436 | 436 |
| Total Supply | 16,625 | 17,311 | 18,176 | 18,622 |

Source: FEA Demand Model (3-12-76)

* FEA: Trends in Refinery Capacity and Utilization, December 1975.

**Other: Processing Gain (Roughly 3% Crude Runs)
Other Hydrocarbon Inputs
Inventory Change (assumed zero - 1976-1978)
Unaccounted for Crude (assumed zero - 1976-1978)



Refinery Capacity

Domestic refinery capacity is projected to closely parallel the projected 2 million barrels per day increase in total domestic petroleum product demand. Projected utilization of this capacity will continue to remain near the 1975 level, but below the longer-term norm of approximately 90 percent, as indicated in Table XIX:

TABLE XIX

DOMESTIC REFINERY CAPACITY UTILIZATION

| Year | Percent Product Input to Capacity | Year | Percent Product Input to Capacity |
|---|---|---|---|
| 1968 | 90.6 | 1974 | 83.1 |
| 1969 | 90.6 | 1975 | 85.7 |
| 1970 | 88.6 | 1976 | 86.0 projected |
| 1971 | 87.2 | 1977 | 86.0 projected |
| 1972 | 88.4 | 1978 | 86.0 projected |
| 1973 | 89.8 | | |

Source: FEA estimates

This projected utilization may be conservative; any additional increase in utilization will offset some of the assumed refined product imports.

Projected refinery capacity by PAD is shown in Table XX. Refinery capacity growth in PADs II and IV is expected to be slower than growth in other regions. This expectation is a function both of crude oil supply sources and expected consumption growth characteristics.

TABLE XX

Projected U.S. Petroleum Refining Capacity, January 1976-79
(thousands of barrels per day)

| Year | PAD Distribution | | | | | Total |
|---|---|---|---|---|---|---|
| | I | II | III | IV | V | |
| 1976 | 1,744 | 4,095 | 6,322 | 567 | 2,425 | 15,153 |
| 1977 | 1,847 | 4,151 | 6,815 | 575 | 2,841 | 16,229 |
| 1978 | 1,870 | 4,221 | 7,209 | 583 | 2,902 | 16,785 |
| 1979 | 2,068 | 4,275 | 7,493 | 591 | 2,933 | 17,360 |
| Percent Growth 1979 over 1976 | 18.6 | 4.4 | 18.5 | 4.2 | 21.0 | 14.6 |

Note: (1) Capacities for 1976 are Office of Oil and Gas data; and capacities for 1977 and later are obtained by adding known projects to 1976 capacities. All capacities are as of January 1 of that year. The discrepancies between these figures and the totals in Table XVIII stem from the choice of different dates for which the totals are derived.

(2) The refinery capacity totals (PAD's I--V) do not include the Virgin Islands or Puerto Rico. The current refinery capacity for these islands is approximately one million barrels per day. Of this total, 700 barrels per day is represented by Amerada Hess domestic refinery capacity located outside of the continental United States.

Refinery yields are an important factor in the supply forecast. Since the rate of demand growth varies by refined product, shifts in refinery yield will be necessary to respond to a changing demand mix. To identify any potential problems associated with refinery yields, historical yields are presented first and then contrasted with future demand mix.



TABLE XXI

REFINERY YIELDS FOR THE UNITED STATES 1/
(Annual Percentage)

| | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 P/ |
|---|---|---|---|---|---|---|---|---|
| Gasoline | 43.9 | 44.8 | 45.3 | 46.2 | 46.4 | 45.8 | 46.2 | 46.8 |
| Jet Fuel | 8.3 | 8.2 | 7.5 | 7.3 | 7.1 | 6.8 | 6.8 | 7.0 |
| Middle Distillates | 24.8 | 24.3 | 24.7 | 24.0 | 24.0 | 24.1 | 23.0 | 22.2 |
| Residual Fuel Oil | 7.2 | 6.8 | 6.4 | 6.6 | 6.7 | 7.7 | 8.7 | 10.0 |
| Other | 18.8 | 19.0 | 19.3 | 19.2 | 19.0 | 19.2 | 19.2 | 17.5 |
| Shortages 2/ | -3.0 | -3.1 | -3.2 | -3.3 | -3.2 | -3.6 | -3.9 | -3.5 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

P/ Preliminary. Based on January-August.

1/ Other unfinished oils added to crude oil in computing yields.

2/ Processing Gain (-) or Loss (+)

Source: U.S. Bureau of Mines

These data indicate that although definite yield patterns exist, the industry is capable of shifting yields significantly in response to changing market conditions. Assuming 86 percent utilization, the 1974 yield percentages were applied to forecast 1978 refinery production as follows (see Table XXII):

TABLE XXII

FORECAST REFINERY PRODUCTION
AT 86 PERCENT CAPACITY UTILIZATION
1978
(Thousand Barrels Per Day)

| | Refinery Yields* | NGL's | Total U.S. Processing | Forecast Demand** | 1978 Indicated Imports | 1975 Import Levels |
|---|---|---|---|---|---|---|
| Gasoline | 6,800 | 700 | 7,500 | 7,375 | (125) | 180 |
| Jet Fuel | 1,200 | --- | 1,200 | 1,209 | 9 | 100 |
| Middle Distillates | 3,200 | --- | 3,200 | 3,386 | 186 | 170 |
| Residual Fuel Oil | 1,280 | --- | 1,280 | 2,541 | 1,261 | 1,250 |
| Other Products | 3,000 | 790 | 3,790 | 3,895 | 105 | 260 |
| TOTAL | 15,480 | 1,490 | 16,970 | 18,406 | 1,436 | 1,960 |

* Assumes percentage yields remain the same as those in 1974.
** Source: FEA Demand Model (3-12-76)

This analysis indicates that continued operation of domestic capacity at the conservatively forecast rate of 86 percent would maintain total imports of refined products at essentially 1975 levels. On a product-by-product basis, some slight shifts in yield are likely, depending on specific demand developments conditioned by weather characteristics and other factors. These shifts in production have been demonstrated historically, and are clearly within the range of industry capability. In fact, new technology in refining allows more flexibility in the yield mixes of new refineries than was possible in the past; thus no refinery yield problems are foreseen for the forecast period.



Foreign Excess Refining Capacity

Even though the FEA estimates that domestic refining capacity will be sufficient to meet increased demand, without an increase of imported product, consideration has been given to the availability of foreign refining capacity, should it become necessary to import additional amounts of refined products.

World refining capacities and consumption for the 1973-1977 period are shown in Table XXIII. The worldwide refining capacity (excluding the United States) has grown from 40 million barrels per day in 1973 to 45 million barrels a day in 1975. The demand for crude oil excluding the U.S. rose to about 31 million barrels per day in 1975 (estimated using a 3 percent growth rate over 1974 demand), which was equivalent to the consumption level in 1973. Free-world refinery capacity utilization, excluding the U.S., decreased from 76 percent in 1973 to 69 percent in 1975.

The refinery construction projects that are currently underway will bring the foreign refining capacity in the free world to about 48 million barrels a day by mid-1977. This level is about 55 percent higher than the estimated 1975 consumption of 31 million

Table XXIII

REFINERY CAPACITIES, 1973-1977
AND PETROLEUM CONSUMPTION, 1973-1974
(Thousand Barrels Daily)

| | 1973 | | 1974 | | 1975 | Refining Additions 1976-1977 | |
|---|---|---|---|---|---|---|---|
| | Ref. Capacity | Consumption | Ref. Capacity | Consumption | Ref. Capacity | Under Construction | Planned [illegible] |
| United States | 14,950 | 16,870 | 14,970 | 16,220 | 15,153 | 1,632 | 3,62[illegible] |
| Canada | 1,875 | 1,755 | 1,975 | 1,850 | 2,213 | 64 | 133 |
| Northern Europe | 13,426 | 10,545 | 13,713 | 9,665 | 14,250 | 849 | 604 |
| Southern Europe | 5,274 | 4,615 | 5,807 | 4,505 | 6,650 | 458 | 836 |
| Japan | 4,870 | 5,450 | 5,075 | 5,310 | 5,011 | 205 | 495 |
| Other Asia/Pacific | 4,065 | 2,050 | 4,215 | 2,935 | 4,433 | 135 | 282 |
| Middle East | 2,595 | 1,255 | 2,650 | 1,355 | 3,015 | 247 | 610 |
| Lat. Am/Carib. | 7,045 | 3,515 | 7,455 | 3,705 | 8,021 | 1,238 | 220 |
| Africa | 1,070 | 975 | 1,235 | 965 | 1,067 | 165 | 170 |
| Total Free World | 55,580 | 47,030 | 57,125 | 46,510 | 60,383 | 5,074 | 6,542 |

Sources: Petroleum Times, Jan. 23, 1976; for 1975 capacities and refining additions outside the United States.
Trends in Refining Capacity and Utilization, FEA, December, 1975; for the U.S. data as above.
BP Statistical Review 1974; for 1973 and 1974 data.



barrels per day in the free world excluding the United States. Assuming reasonable rates of refinery utilization (77 percent) excluding the U.S., there would be enough refining capacity, at 48 million barrels daily, to accommodate a petroleum demand growth rate in this area of the free world of 9 percent per year in the 1975-1977 period. It is the judgment of FEA that worldwide consumption will not grow at this rate, but will continue to grow at a rate closer to the historical 3 percent rate, so that there will be an excess foreign refining capacity available to meet U.S. refined product import demand.

Availability of Crude Oil

Supply projections indicate that increasing amounts of imported crude oil will be refined domestically, and that imports of refined products will not increase. Crude oil imports were projected at the following levels:

| | | |
|---|---|---|
| 1975 | 3,925 | (thousands of barrels per day) |
| 1976 | 5,013 | " " " " " |
| 1977 | 5,936 | " " " " " |
| 1978 | 5,170 | " " " " " |

As indicated, the requirement for imports drops from its peak of 5,936,000 barrels in 1977 to 5,170,000 barrels per day in 1978, despite the projected rise in total petroleum product demand. This decline is due to anticipated additional domestic crude oil production from Alaskan sources which is expected to bring an additional 1.2 million barrels per day by 1978.

The FEA has determined that sufficient shut-in production is available in foreign countries to meet the increased demand for crude imports. The October 1975 crude oil shut-in production in the major exporting countries amounted to 34.5 percent of total production capacity (Table XXIV). While 13 OPEC countries, Canada, and Mexico together had a total production capacity of almost 42 million barrels per day in October 1975 they only produced 27.5 million barrels per day. These countries are thus capable of producing an additional 14 million barrels per day provided that such a level of demand exists and that incentives exist for expanding production.

Thus, without controls, the national supply of all refined products including middle distillates is expected to be adequate to meet demand through 1978. Furthermore, no localized supply problems are anticipated as a result of decontrol. An FEA



## Crude Oil Production

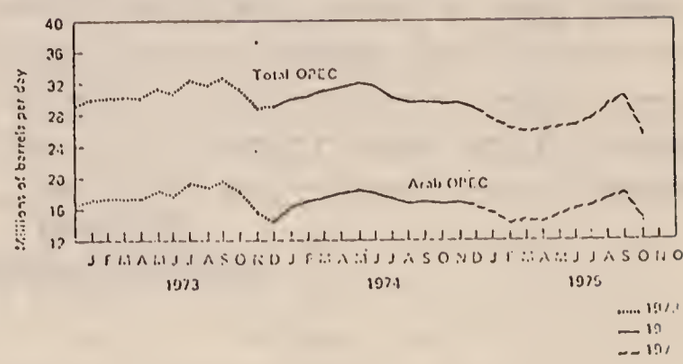
TABLE XXIV

Crude Oil Production for Major Petroleum Exporting Countries — October 1975

| Country | Production | | | | Production Capacity | Production Shut-in |
|---|---|---|---|---|---|---|
| | 1973 | 1974 | 1975 (10 months) | October | October | October |
| | In thousands of barrels per day | | | | | In percent |
| Algeria | 1,020 | 940 | 918 | 990 | 1,020 | 10.0 |
| Iraq | 1,961 | 1,820 | 2,291 | 2,460 | 3,000 | 17.0 |
| Kuwait* | 3,024 | 2,550 | 2,105 | 1,530 | 3,500 | 56.3 |
| Libya | 2,187 | 1,529 | 1,452 | 1,659 | 2,509 | 34.0 |
| Qatar | 570 | 520 | 495 | 390 | 700 | 44.3 |
| Saudi Arabia* | 7,607 | 8,460 | 7,037 | 5,660 | 11,000 | 49.0 |
| United Arab Emirates | 1,518 | 1,699 | 1,647 | 760 | 2,949 | 27.4 |
| Subtotal: Arab OPEC | 17,940 | 17,510 | 15,656 | 14,520 | 24,540 | 40.8 |
| Ecuador | 204 | 160 | 159 | 160 | 250 | 36.0 |
| Gabon | 147 | 180 | 208 | 200 | 250 | 20.0 |
| Indonesia | 1,939 | 1,389 | 1,293 | 1,370 | 1,709 | 19.4 |
| Iran | 5,861 | 6,040 | 5,434 | 4,730 | 6,690 | 30.4 |
| Nigeria | 2,059 | 2,200 | 1,740 | 1,910 | 2,599 | 23.6 |
| Venezuela | 9,964 | 2,970 | 2,436 | 2,360 | 9,000 | 21.7 |
| Subtotal: Non-Arab OPEC | 12,958 | 12,990 | 11,279 | 10,720 | 14,500 | 26.1 |
| Total: OPEC | 30,908 | 30,500 | 27,137 | 25,240 | 39,040 | 35.3 |
| Canada | 1,798 | 1,695 | 1,446 | 1,450 | 2,016 | 29.1 |
| Mexico | 465 | 590 | 695 | 790 | 840 | 7.1 |
| Total: OPEC, Canada Mexico | 39,171 | 32,775 | 29,279 | 27,450 | 41,896 | 34.5 |
| Total World | 55,715 | 55,055 | 53,107 | 51,570 | | |

*Includes about one half of Neutral Zone production which amounted to approximately 463,000 barrels per day in October.
Source: Central Intelligence Agency.

OPEC Countries Crude Oil Production



pilot study of the Northern Tier refineries recently addressed the potential impact on the Northern Tier states (Wisconsin, Minnesota, Michigan, North Dakota, and Montana) expected to result from the phase-out of Canadian crude imports by 1982. Short-term and long-term allocation controls will not in themselves adversely affect the Northern Tier states; nor will decontrol reduce FEA's ability to implement the identified Northern Tier supply options.

Pricing Factors

Pricing in the petroleum industry is strongly influenced by the following closely interrelated factors:

- o supply/demand balance,
- o total production costs and profitability,
- o return on investment requirements,
- o foreign prices and
- o market structure and degree of competition.

In this section, the implications for prices due to these factors are assessed, with a focus on how controls exert influence on these factors.

Supply/Demand Balance

Previous discussion on supply/demand indicates that adequate product supplies can be made available and that no shortages exist or are expected under conservative demand projections. Therefore, no pressures for increased prices can be ascribed to potential shortages or capacity constraints.



Costs and Profitability

Banked Costs

Under current FEA regulations a refiner is permitted to pass through increases in product costs and nonproduct costs subject to certain constraints. Further, those increased product and nonproduct costs which cannot be recouped during the month following the month in which they are incurred can be carried forward, (i.e., banked) for future use.

However, limits have been placed on the use of these banks by refiners. In the case of middle distillates, a separate bank exists for No. 2 oils, both heating and diesel, whereas other middle distillates fall under the category of general refinery products. The refiner can shift costs among most general refinery products and can shift costs from No. 2 oils or general refinery products to gasoline; but he cannot shift the costs of any products to No. 2 oils. Thus, the bank for No. 2 oils is only a measure of the maximum amount of a refiner's unrecovered costs for No. 2 oils. It may generally be inferred that a refiner with a bank is pricing at market-clearing prices and is not constrainted by the price regulations, while a refiner with no bank is being limited

by price rules in his pricing policy. However, it should be noted that a variety of considerations other than the FEA price rules may also influence a refiner or marketer to charge prices lower than the maximum lawful prices permitted under regulations.

A refiner does not necessarily price his product on the basis of a rigid distribution of costs. Large refiners may have many different prices for the same product on the same day. Also, due to the location of refineries and pipeline terminals, which are not always in the region where a particular refiner has marketing outlets, the use of exchanges is widespread. In an exchange one refiner receives product from another refiner who usually has a dominant position in the marketing region because of its availability of product. The refiner who receives product in this situation is faced with marketing conditions that may be controlled by the local refiner.

Banks are not a normal function of refinery accounting. They are, in fact, an accounting procedure which has been imposed on the industry by government regulation. Since January 1974, if a refiner for any reason should decide to defer putting into effect an authorized price increase, it must keep separate accounting records of the value of the



deferred authorized increase. This can occur month-by-month and, as deferments accumulate, banks are created. From the point of view of regulatory action there is no doubt that the rules which created banks represent an effective mechanism for controlling and delaying price increases. However, from the refinery accounting point of view banks represent an artificial regulatory tool which can be eliminated when the regulation is rescinded.

There can be several reasons why a refiner does not pass through all of its authorized cost increases in a given month. One reason could be price competition. In addition, however, the marketing strategy of a refiner may be to attempt to increase its relative market share by undercutting, often for extended periods of time, its competitors' prices. Corporate strategy also comes into play and a decision could be reached to increase inventories. Current stocks of petroleum products are more costly than they were in 1968 and, at present prices, represent a considerable increase in current asset value.

Comprehensive data is available on thirty major refiners but is limited with respect to small independent refiners, who have a great deal of influence on regional prices. Many of these, due to a lack of cheap transportation, are the sole source of middle distillate supply in a given area and are suppliers to major oil companies which maintain local marketing outlets. FEA regulations also

permit deferred cost recovery (banks) at the wholesale and retail levels. No data is available on the size of these banks although their existance, at least with respect to distillate, can be ascertained from Form CLC 92 reports which are on file. Due to the fact that no complete data is available concerning the size of banks, it is difficult to use them as a basis for making predictions.

Nevertheless, the absence of any middle distillate banks at all would certainly be a reason to expect some price increase as a result of exemption from price controls. Conversely, the existance of middle distillate banks by itself, absent any countervailing explanatory factors, is a reason not to expect such a price increase.

To estimate the effect of exempting No. 2 oil and other middle distillates, banked cost data for individual refiners were examined to compare refiners who had banks and those who did not. Refiners who had no banked costs or who had used their banks over the 3-month period (October 1975 - January 1976) to the maximum extent allowable under the old or new regulations were considered to be constrained by the price regulations. Those with banks were considered not to be constrained.



In the case of No. 2 fuel oil, twenty-three of the top thirty refiners with banks, controlling about 80 percent of the market, appeared not to be constrained, while in the case of the other middle distillates, twenty of the top thirty firms with banks, controlling about 60 percent of the market, appeared not to be constrained.

FEA wholesale price and sales data for these refiners were examined to estimate the weighted average prices in the constrained and unconstrained segments of the No. 2 heating oil, No. 2-D diesel fuel, and other middle distillates markets. These prices were then compared in order to estimate the effect of exemption on the prices of No. 2 heating oil, No. 2-D diesel fuel, and the average price of all other middle distillates (assuming the case in which the unconstrained and constrained segments of the market are not affected by each other). In the case of No. 2. heating oil, the weighted average wholesale price for all refiners was estimated to rise from 31.18 cents per gallon to 31.30 cents per gallon, a rise of 0.12 cents per gallon. In the case of No. 2-D diesel fuel, the weighted average wholesale price for all refiners was estimated to rise from 31.80 cents per gallon to 31.84 cents, a rise of only

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0.04 cents per gallon or about one-tenth of a percent. Finally, in the case of all other middle distillates, the weighted average wholesale price was estimated to rise from 30.23 cents per gallon to 31.50 cents, a rise of 1.27 cents per gallon.

Crude Oil Costs

It is clear that middle distillate prices will probably rise as crude oil costs rise whether middle distillates are exempted or not.

Domestic crude costs will rise in accordance with the provisions of the EPCA. It is difficult to project the rate of increase in foreign crude costs, but it is expected that these costs will not decline and may rise in the near future. The cost to the U.S. of imported crude oil is assumed to rise at a rate of inflation for U.S. goods and services. As the volume of imported crude oil increases through 1977 relative to the volume of domestic crude oil, the average costs of crude oil to U.S. refiners will rise at a higher rate than the rate of inflation. Projected increases in crude oil costs are shown in Table XXV.



TABLE XXV

PROJECTED COMPOSITE CRUDE COSTS
INCREASES WITH CONTROLS

| Year | Quarter | Cumulative Increase (Decrease) From 4th Qtr. 1975 ($/Barrel) | Percentage Increase (Decrease) From Prior Quarter |
|---|---|---|---|
| 1976 | 1st | (.80) | (7.4) |
| | 2nd | (.85) | (0.5) |
| | 3rd | (.64) | 2.1 |
| | 4th | (.42) | 2.2 |
| 1977 | 1st | .01 | 4.1 |
| | 2nd | .22 | 1.9 |
| | 3rd | .42 | 1.8 |
| | 4th | .64 | 2.0 |
| 1978 | 1st | 1.12 | 4.2 |
| | 2nd | 1.34 | 1.8 |
| | 3rd | 1.57 | 1.9 |
| | 4th | 1.78 | 1.7 |

SOURCE: FEA Demand Model, 3-12-76

Assuming that the rising crude costs are allocated to all refined products on a percentage of sales basis, controlled middle distillates price increases will closely follow those of crude cost increases, depending on the amount of middle distillates imported. Cumulative price increases for middle distillates with controls are shown in Table XXVI. Projected prices drop by 80 cents per barrel in the first quarter of 1976 as a result of lifting the supplemental import fees on crude oil on December 22, 1975, and the implementation of the EPCA, which reduces domestic crude costs. Thereafter, middle distillates prices could increase at rates of about 7 to 7.5 percent per year.

Gross Margins for Refining, Distributing and Retailing*

An important consideration in determining the effect of exemption on middle distillates prices is whether or not gross margins for refining, distributing, and retailing of middle distillates will expand.

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* Retailing, as used here, refers to the delivery of the Heating Oil to consumers.



TABLE XXVI

PROJECTED MIDDLE DISTILLATES PRICE INCREASES WITH CONTROLS

| Year | Quarter | Cumulative Increase (Decrease) From 4th Qtr. 1975 (Dollars/Barrel) | Percentage Increase (Decrease) From Prior Quarter |
|---|---|---|---|
| 1976 | 1st | (.76) | (5.3) |
| | 2nd | (.79) | (0.2) |
| | 3rd | (.59) | 1.5 |
| | 4th | (.38) | 1.5 |
| 1977 | 1st | .03 | 3.0 |
| | 2nd | .22 | 1.3 |
| | 3rd | .42 | 1.4 |
| | 4th | .64 | 1.5 |
| 1978 | 1st | 1.09 | 3.0 |
| | 2nd | 1.31 | 1.4 |
| | 3rd | 1.53 | 1.4 |
| | 4th | 1.74 | 1.3 |

SOURCE: FEA Demand Model, 3-12-76

Whether or not these margins are currently at normal profit levels or whether these are being constrained by price controls is difficult to determine with available data. Gross margin information, as discussed in Chapter III, is the difference between the price of the product and its cost per unit, and does not necessarily reflect levels or adequacy of profits. However, the levels for gross margins which the FEA has been able to estimate do provide general guidelines upon which judgments can be made.

The FEA judges that a rise in the price of middle distillates, which would bring gross margins for refining, distributing and retailing of middle distillates within the range of general inflation, ranges from no increase to 1 cent per gallon.

Gross Margin for Refining, Distributing, and Retailing Middle Distillates

The gross margin in case of No. 2 heating oil for all refining, distributing and retailing is the difference between the price to end-users and the cost of crude oil into refineries. This gross margin represents a measure of the per unit revenue for refining, distributing, and retailing of No. 2 Heating Oil, which accounts for nearly half of middle distillate demand. In order to make a judgment regarding whether or not this margin is adequate to yield a normal rate of return, its rate of increase was compared with the general rate of inflation as measured by the Consumer Price Index (CPI). The year 1968 was taken as a reference year because it represents a reasonable time before the first price controls were implemented in 1971.



From an analysis of Table XXVII, gross margin for refining, distributing, and retailing of No. 2 heating oil almost kept pace with inflation during the period from 1968 to December 1975 (the latest month for which crude cost data were available). The CPI rose during this period by 59.6 percent, whereas the gross margin increased by 48.9 percent. In order for the margin to keep up with inflation, a price rise of less than 1 cent per gallon would be needed. However, it is important to take into account the rise in volume of sales since 1968. When this gross margin is adjusted for the increase in the volume of sales, it is more than adequate to keep up with inflation (see Table XXVIII). It appears that efficiencies in production and the volume of production may account for the rate of increase in this gross margin being slower than the general rate of inflation. Thus, the gross margin for refining, distributing and retailing is not likely to exert strong pressure for price increases. Also, the adequacy of supply in relation to demand will tend to keep margins from increasing so refiners can maintain their market shares.

Refiner/Distributor Margin

Table XXIX shows the movement of refiner/distributor gross margins from 1973 to 1975. These figures exclude the gross margin for retailing. The movement of refiner/distributor margins was greater than the increase in the CPI for 1974 and 1975. It should also be noted that since refiner/distributor margins were at their peak during the period of greatest

TABLE XXVII

COMPARISON OF THE GROSS MARGIN FOR REFINING, DISTRIBUTING AND RETAILING TO THE CONSUMER PRICE INDEX (OVERALL INDUSTRY

| YEAR | GROSS MARGIN IN COSTS/GALLON | CPI | PERCENT INCREASE FROM 1968 | |
|---|---|---|---|---|
| | | | GROSS MARGIN | CPI |
| 1968 | 9.4 | 104.2 | 0.0 | 0.0 |
| 1969 | 9.5 | 109.8 | 1.1 | 5.4 |
| 1970 | 9.8 | 116.3 | 4.3 | 11.6 |
| 1971 | 10.4 | 121.3 | 10.6 | 16.4 |
| 1972 | 10.6 | 125.3 | 12.8 | 20.2 |
| 1973 | 12.1 | 133.1 | 28.7 | 27.7 |
| 1974 | 14.4 | 147.7 | 53.2 | 41.7 |
| 1975* | 14.0 | 166.3 | 48.9 | 59.6 |

* December 1975 data

Source: Bureau of Labor Statistics, FEA, Bureau of Mines, Bureau of Census Import Costs



TABLE XXVIII

COMPARISON OF GROSS MARGIN FOR REFINING, DISTRIBUTING AND RETAILING OF NO. 2 HEATING OIL ADJUSTED FOR INCREASED SALES VOLUME, TO THE CONSUMER PRICE INDES (OVERALL INDUSTRY)

| Year | Gross Margin in Costs/Gallon | CPI All Items | Percentage Increase from 1968 | |
|---|---|---|---|---|
| | | | Gross Margin (Adj. for Increased Sales) | CPI |
| 1968 | 9.4 | 104.2 | 0.0 | 0.0 |
| 1969 | 9.5 | 109.8 | 3.9 | 5.4 |
| 1970 | 9.8 | 116.3 | 10.4 | 11.6 |
| 1971 | 10.4 | 121.3 | 22.7 | 16.4 |
| 1972 | 10.6 | 125.3 | 37.0 | 20.2 |
| 1973 | 12.1 | 133.1 | 66.0 | 27.7 |
| 1974 | 14.4 | 147.7 | 83.8 | 41.7 |
| 1975 | 14.0* | 166.3 | 78.8 | 59.6 |

* December 1975 data

Source: Bureau of Labor Statistics, FEA, Bureau of Mines, Bureau of Census Import Costs

TABLE XXIX

COMPARISON OF REFINER/DISTRIBUTOR HEATING OIL GROSS MARGINS TO CPI

| YEAR | Heating Oil Refiner/Distributor Gross Margins (Cents/Gallon) | CPI | Percent Increase From 1973 | |
|---|---|---|---|---|
| | | | Heating Oil Margins | CPI |
| 1973 | 4.8 | 131.5 | 0.0 | 0.0 |
| 1974 | 5.7 | 147.7 | 18.8 | 12.3 |
| 1975 | 6.3 | 166.3 | 31.3 | 26.5 |

SOURCES: FEA, Bureau of Labor Statistics



middle distillate sales, revenue yields were above the historic average. The refiner/distributor margin outpaced inflation and volume increased. These two trends indicate that this gross margin, as part of the total refiner/distributor/retailer margins, is not generating strong pressure for price increases. If for the period 1976-1978 a change in conditions such as a shortage of supply were predicted, it could very well happen that the distributor margins would increase; however, no shortages have been forecast. By maintaining the 1968-1975 average level of middle distillate imports, domestic supply and demand are expected to be in equilibrium. As a result, these gross margins are not expected to change.

Retailer Margins

Possible upward price pressure could develop at the retailer level, since, as Table XXX illustrates, retailer margins were relatively low in December of 1975, as compared to 1974 and as compared to the CPI. To keep up with inflation, a little more than a 1 cent increase would be adequate. However, it is likely that retailer margins have been constrained more as a result of conpetition pressures than price controls and that increases in the level of gross margins would occur whether price controls were continued or eliminated.

Profit

To gain more insight into the potential pressures on prices, data on oil industry profits were studied. While these data are not directly pertinent to middle distillate prices, they do illustrate the relative health of the industry's profits.

TABLE XXX

COMPARISION OF RETAILER HEATING OIL GROSS MARGINS TO CPI

| Year | Retailer Gross Margins | CPI | Percent Increase from 1973 Margins | CPI |
|---|---|---|---|---|
| MAY 1973 | 7.4 | 131.5 | 0.0 | 0.0 |
| 1974 | 7.8 | 147.7 | 5.4 | 12.3 |
| DEC 1975 | 7.7 | 166.3 | 4.1 | 26.5 |

Source: FEA



The profits of multi-national oil companies declined 23 percent in 1975 from the record year of 1974. Most of the large gains of 1973 and 1974 were in the companies' foreign operations and large parts of those gains were composed of inventory profits. In the U.S., profits increased gradually but steadily. Over the last 8 years, domestic profits grew by 7 percent per year (compounded annually), with little deviation from a steady trend. On a worldwide basis, the return on equity for these companies in 1975 was above their historical average, based on preliminary data (see Table XXXI). The 8-year average, which includes the 2 years of price controls, is slightly above the all-industry average (12.3 percent versus 12.1 percent).

Domestic return on equity has averaged 10.9 percent for the last 8 years. In the last 3 years, with higher crude oil prices, returns on domestic petroleum have been below the average for all industries. The low point was a 9.3 percent return in 1971.

Equity (stockholders' investment) has also been growing at a rate slightly less than 7 percent. Recent capital expenditure forecasts indicate that the companies will invest the amounts required to maintain this trend. Thus, if the trends of earnings and equity growth reassert themselves, we could look forward to a period of average return on equity in the near future.

TABLE XXXI

RATES OF RETURN
ON EQUITY-%

| Year | Domestic Petroleum | Foreign Petroleum | Worldwide Petroleum | All Industries |
|---|---|---|---|---|
| 1968 | 11.9 | 10.0 | 11.1 | 12.4 |
| 1969 | 10.6 | 10.9 | 10.7 | 11.8 |
| 1970 | 10.0 | 10.7 | 10.3 | 10.1 |
| 1971 | 9.3 | 11.9 | 10.5 | 10.9 |
| 1972 | 9.6 | 9.6 | 9.6 | 11.8 |
| 1973 | 10.3 | 19.6 | 14.8 | 14.2 |
| 1974 | 13.6 | 22.2 | 17.7 | 14.0 |
| 1975 | 12.3E | 15.2 | 13.8 | 11.8 |
| 8-Year average | 10.9 | 13.7 | 12.3 | 12.1 |

Calculated from Chase Manhattan Bank Data



The growth of investment and the profit levels appear to be generating a satisfactory return. Thus, profit levels do not appear to be generating any pressure for price increases at this time. To the extent that profit at the refinery level had been abnormallly constrained by the operation of FEA's price control program, elimination of the profit margin restriction and other amendments to FEA's price regulations grant increased pricing flexibility and should permit a return to normal profit levels on middle distillates even if controls were continued in effect on these products.

Foreign Prices

The FEA expects that the availability of foreign sources of middle distillates could have an effect of limiting domestic prices during the period of 1976 to 1978 if pressures develop within the petroleum industry to increase prices. There are two sources of middle distillates imports which may be used separately or together to counteract any large increases in the domestic prices of middle distillates.

First, middle distillates can be imported directly from foreign refineries. A review of recent European prices (Table XXXII) shows that for the period from January 1975 to February 1976 average Italian prices (including transportation and import charges) were 3.6* cents per

* Spot market purchases are assumed to be made by firms with available license tickets and, hence, these purchases are brought into the U.S. fee free -- amount of license fee is not included in these prices.

## TABLE XXXII

## DOMESTIC AND LANDED IMPORTED PRODUCT PRICES*
(all prices are cents per gallon)

| | JAN 1975 | FEB 1975 | MAR 1975 | APR 1975 | MAY 1975 | JUN 1975 | JUL 1975 | AUG 1975 | SEP 1975 | OCT 1975 | NOV 1975 | DEC 1975 | JAN 1976 | FEB 1976 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline (reg.) | | | | | | | | | | | | | | |
| ITALY | 30.0 | 31.2 | 32.8 | 33.2 | 36.4 | 38.1 | 36.1 | 35.8 | 33.7 | 35.5 | 37.3 | 37.9 | 36.2 | 38.2 |
| ROTTERDAM | 31.6 | 33.0 | 34.0 | 35.8 | 37.4 | 40.1 | 35.5 | 35.9 | 35.8 | 36.8 | 38.6 | 39.3 | 38.6 | 39.6 |
| DOMESTIC | 27.8 | 28.4 | 28.9 | 29.6 | 30.9 | 32.4 | 34.4 | 35.3 | 35.2 | 34.3 | 34.1 | 33.7 | 33.3 | 32.5 |
| Italy | +2.2 | + 2.3 | +3.9 | +3.6 | +5.5 | +5.7 | +1.7 | + .5 | -1.5 | +1.2 | +3.2 | +4.2 | +2.9 | +5.7 |
| Rotterdam | +3.8 | +4.6 | +5.1 | +6.2 | +6.5 | +7.7 | +1.1 | + .6 | + .6 | +2.5 | +4.5 | +5.6 | +5.3 | +7.1 |
| Distillate | | | | | | | | | | | | | | |
| ITALY | 30.4 | 28.3 | 28.7 | 29.7 | 30.5 | 34.6 | 34.5 | 37.6 | 40.0 | 41.1 | 38.6 | 37.0 | 36.1 | 35.2 |
| ROTTERDAM | 29.8 | 29.1 | 27.9 | 30.8 | 32.9 | 37.6 | 34.3 | 39.3 | 39.3 | 40.4 | 38.8 | 35.7 | 35.8 | 35.1 |
| DOMESTIC | 30.3 | 29.6 | 29.5 | 29.4 | 30.5 | 30.4 | 30.4 | 31.6 | 31.4 | 32.0 | 32.5 | 32.9 | 32.5 | 32.8 |
| Italy | + .1 | -1.3 | - .2 | + .3 | 0 | +4.2 | +4.1 | +6.0 | +8.6 | +9.1 | +6.1 | +6.1 | +3.6 | +2.4 |
| Rotterdam | - .5 | -1.5 | -1.6 | +1.4 | 2.4 | +7.2 | +3.9 | +7.7 | +7.9 | +7.4 | +6.3 | +2.8 | +3.3 | +2.3 |

Sources: Domestic Distillate - FEA Survey form CLC 92 for #2 distillate for New England Region - prices reflect distributor purchase prices.

Domestic Gasoline - FEA Jobber Survey of Major Brand Regular Gasoline for the Northeast Region - prices reflect jobber purchase prices.

ITALY - Platts Oilgram European Bulk Cargoes for regular gasoline and gasoil, FOB ITALY, plus duty and transportation charges (Mediterranean - USNH World scale rate)

ROTTERDAM - Platts Oilgram European Bulk Cargoes for regular gasoline and gasoil CIF ROTTERDAM plus duty and transportation charges (ROTTERDAM - USNH World scale rate).

Imported product prices from Rotterdam and Italy represent fee-free prices. If a license fee is required, an additional 1.5 cents/gal. should be added.

gallon higher than average domestic prices. However, the differences ranged from 1.3 cents to 9.1 cents. For this same period, average Rotterdam prices were 3.6 cents per gallon higher than domestic prices. During the month of February 1976, the Rotterdam prices were 2.3 cents per gallon above domestic prices. Thus, an estimate of the differences between domestic and world prices is from zero to about 3 cents per gallon. It is important to emphasize that both of these European price series are based on spot market transactions and as such they fluctuate considerably.

The FEA believes that the availability of middle distillates from these markets is a potential deterrent to significant domestic price increases. For example, in February 1975, when Italian prices were 1.3 cents below domestic prices, the volume of middle distillates imported increased. If domestic prices exceed foreign prices, the expected increase in imports will act to soften domestic pricing.

A second source of middle distillates for the United States is to have crude oil refined on processing agreements in overseas refineries and imported into the United States. Table XXXIII shows the relative cost of refining by processing agreements at current prices and shows that the estimated price of 35.9 cents per gallon



TABLE XXXIII

Imported Refined Product Price for
Saudi Arabian Crude Oil, Refined in Caribbean and
Transported to USNH for Consumption

| | |
|---|---|
| Crude Price for Saudi Arab. | $11.51 |
| Trans. to Caribbean | 1.42 |
| Landed Caribbean Crude Cost | $12.93 |
| Refining Costs | 1.00 |
| | $13.93 |
| **Gasoline** | |
| | $13.93 |
| Trans. to USNH | .44 |
| USNH Landed Price per Barrel | $14.37 |
| Price per Gallon | .3421 |
| License Fee | .0150 |
| | .3571 |
| **Middle Distillates** | $13.93 |
| Trans. to USNH | .52 |
| | $14.45 |
| | .3440 |
| License Fee | .0150 |
| | .3590 |

Sources: Crude Price - Market price for 34° gravity Arabian light.

Transportation Costs - WS 100 - Platts Oilgram, January 14, 1976; AFRA Indices - Petroleum Economist, January 1976

License Fee - FEA Oil Import Administration

Refining Costs - FEA Study

NOTE: USNH = United States East Coast, North of Cape Hatteras, North Carolina

would be approximately 3* cents per gallon higher than the domestic prices of 32.8 cents shown for February 1976 (Table XXXII). The two foreign sources of middle distillates represent a level of about 3 cents per gallon above domestic price, which provides a ceiling on the extent to which middle distillate prices can rise without triggering increased imports.

However, FEA also recognizes that competitive forces within the U.S. market may prevent middle distillates from reaching the limit set by world prices, particularly since FEA finds current supplies adequate to meet demand and anticipates no shortages, at least in the next two years.

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* Depending on when middle distillate prices are exempted, the "gap" between domestic and foreign middle distillate prices could be higher than the 3 cents per gallon estimated for January 1976. With the removal of the supplemental fees on imported crude oil on December 22, 1975, and the lowering of domestic crude costs by the EPCA, crude costs to refiners are projected to decline by 80 cents per barrel during the first quarter of 1976 (see Table XXV). Assuming that refiners do not change their banked cost positions as they existed in January 1976, and also assuming that crude costs are allocated to middle distillates on a proportionate basis, domestic middle distillate prices will drop by about 2 cents per gallon by the end of the first quarter of 1976. As a result, the gap between domestic middle distillate prices and European spot market prices may increase, depending on the behavior of European spot prices. If European prices do not change from their March 16, 1976, level, the gap at the end of June 1976 would be roughly 5 cents per gallon. About the same gap will exist for a longer-term case which is based on the cost of foreign crude oil.

To the extent that refiners can and do draw down their middle distillates banks, the drop in domestic middle distillates prices will not be as great. However, latest FEA data on banked costs (January 1976) indicate that the middle distillate banks for many refiners are quite small, and they will not be able to use their banks to prevent middle distillate price declines.



MARKET STRUCTURE AND COMPETITION

In the "market structure" section of Chapter III, it was concluded that the middle distillates market shares of independent refiners and distributors have increased recently.

In this section, the market structure and competitive outlook through 1978 for the middle distillates refining and distribution sector are assessed, with an emphasis on the incremental effects of removing price and allocation regulations. The key competitive factors of access to supplies, price of supplies, and market shares of participants are analyzed. The section concludes with a review of the potential effects of possible foreign competition on the U.S. middle distillates market.

Refining

The current structure of the refining sector is projected to remain stable over the next few years, and little or no change in the number of refiners (currently about 130) is expected.

Although crude oil imports should continue to increase until 1978 (when the Alaskan North Slope production reaches 1.2 million barrels per day), independent refiners heavily dependent on higher-priced imports will have access through the Entitlements Program to equitably priced supplies due to the 40-month extension of crude oil price controls mandated by the EPCA.

Given the normal supply/demand price conditions projected earlier, exemption of middle distillates from controls should not adversely effect the competitive viability of the refining sector. Independent and small refiners should be able to maintain their stable market position during the period of projected adequate supply.

Marketing

Independent marketers increased their market share of middle distillate sales to ultimate consumers steadily from 1972 to 1975. The factors which caused this increase are still at work, and independent marketers should remain strong and perhaps even increase their share over the next few years for several reasons. There is an increased consumer price sensitivity which should benefit the independent jobbers. Historically, fuel oil consumers did not actively search for lower-priced fuel once they had entered into a supply agreement. However, homeowners and commercial customers are much more conscious today of fuel oil prices of different suppliers.

Because there is little difference (in the aggregate) among direct refiner-marketer and independent marketer prices, the market share changes occurring from this increased price sensitivity will depend on local competitive strengths, an area in which the independent local distributor has always been strongest. Also, independent middle distillates wholesalers and distributors are shifting to more sophisticated



management and computer systems. This should increase the overall efficiency of the independents and increase their competitive strength.

Finally, although the trend away from direct distribution by large integrated refiners will probably level out with exemption, there are no new competitive practices expected on the part of large integrated refiners that should reverse this trend.

Based on these projected trends, as well as the projected excess refinery capacity and stable price trends discussed earlier, the FEA concludes that continued allocation and price controls are not needed to assure adequate supplies at competitive prices for independent refiners and marketers of middle distillates.

Regionally, the most important question concerning exemption of middle distillates is the impact that higher-priced imported middle distillates could have on New England wholesalers and distributors. The FEA has concluded that projected imports for the next two years will be small (under 200,000 barrels/day) and can be replaced by domestic supply. However, during the initial period of decontrol, imported vs. domestic price trends and supplies should be monitored to assure that any changes in supply/demand/price of independent distributors are due to normal market forces, and are not abnormalities associated with exemption from price controls.

GENERAL IMPACTS

In assessing the impacts of decontrol of middle distillates FEA has also considered the general effects which allocation and price regulations have had on marketers and consumers during the period of controls and whether these effects are better continued or removed. Several basic features of the allocation and price regulations which were designed to protect consumers during a period of shortage have been found to be not only inappropriate and unnecessary under current market conditions, but, in fact, counterproductive and costly in a period of ample supply. FEA has concluded therefore, that removal of controls on middle distillates would have several advantages and positive effects especially for smaller marketers of middle distillates and for consumers. These conclusions have been confirmed by a majority of the particpants in public hearings held on the preliminary findings and views.

The beneficial results of removing price and allocation controls include the following:

. Unsatisfactory supplier/purchaser relationships could be terminated. Although purchasers are not required by any FEA regulation to purchase exclusively from their base period suppliers, in actual practice, alternative supply arrangements can be found only on a "spot" basis from suppliers who have surplus product available.



The tenuous nature of these arrangements is unsatisfactory for the purchaser.

Purchasers would be able to shop freely in the market for the best terms and prices available. Competitive bidding and direct negotiation for longer term supply contracts would again be a feasible business practice and would exert a downward pressure on prices. Present FEA regulations do not prohibit competitive bidding, but suppliers are generally unable to enter into new contracts because they cannot certify their ability to supply beyond the current period for which they have surplus product available. This change is especially beneficial to state and local governments, many of which are required by their statutes to purchase through competitive bidding.

Suppliers would regain the flexibility to respond to changing levels and patterns of demand in the marketplace. Under present regulations supply volume obligations and supplier/purchaser relationships are frozen to a 1972 reference point. These rules have inhibited the capacity of suppliers to shift supply commitments to areas of increasing population and industrial expansion.

Furthermore, suppliers and purchasers are locked into situations that existed in 1972, but bear little

relationship to the current marketplace. The continuation of controls would have the effect of perpetuating unrealistic distribution and supply arrangements. The result is the maintainance of artificial market conditions, which would be extremely detrimental to the nation in the event of another shortage similar to that faced during the last embargo.

Industrial and commercial growth would be encouraged ratner than inhibited. Inability to secure firm supply commitments has inhibited plant expansion and capital development. Under present regulations, businesses at all levels are frozen into a system that prescribes how much product suppliers are obligated to furnish, to whom product must be supplied and the price at which it must be supplied.

Desirable and necessary seasonal inventory buildup would be encouraged and facilitated by the removal of price controls. These controls have acted as a disincentive to the crucial seasonal buildup of distillate heating oil stocks because of restrictions on suppliers ability to recover costs associated with maintaining these supplies in storage.

Costly and burdensome recordkeeping and reporting would be eliminated. The enforcement of any regulatory



program necessarily requires the maintainance of records and submission of reports. A program as extensive as that currently in effect requires reporting on prices and supply volumes at all levels of the petroleum industry. Although FEA has made extensive efforts to simplify its reporting and recordkeeping requirements the scope of information required for enforcement of the regulations necessitates relatively complex paperwork. FEA has found this to be especially costly and burdensome to smaller marketers who have registered numerous complaints to the FEA.

## SUMMARY AND CONCLUSIONS

In this section the analyses of demand, supply, pricing factors, and market structure and competition are consolidated along with FEA's findings to answer the principal questions presented at the beginning of this chapter.

Are middle distillates in adequate supply and will exemption of middle distillates from regulation have an adverse impact on the supply of middle distillates or any other refined product?

FEA finds that the supply of middle distillates over the 1976-1978 period will be adequate and that exemption will not result in shortages of middle distillates or other products. Even under a forecast of high demand, domestic and foreign refining capacity is projected to be adequate to meet any increases in demand. An analysis of the yields of other products when refineries run at rates sufficient to meet middle distillates demand indicates no supply problems with other refined products. Furthermore, FEA finds that each sector of the industry -- refiners, distributors, and retailers -- will continue to have access to adequate supplies at equitable prices because of market forces created by supply/demand balances and competition, and in the case of refiners, because of the FEA Domestic Crude Oil Entitlements and Buy/Sell Programs.



Will exemption result in inequitable prices for any class of user of middle distillates or any other refined product?

Will competition and market forces be adequate to protect consumers following an exemption of middle distillates from regulations?

The changing cost of crude oil is one of the primary causes of price changes in middle distillates. Crude oil prices are expected to increase by as much as $1.78 per barrel by 1978 under crude oil price control provisions. This crude oil price increase will create direct pressure for price increases among middle distillates products which amount to as much as 4.0 cents/gallon,* even should price controls on middle distillates be continued, because current regulations permit refiners to recover increased crude oil costs.

The factors discussed below, however, may affect middle distillate prices if these products are exempted from controls. FEA's views as to the effect of each of these factors on middle distillate prices can be summarized as follows.

Foreign prices should place a ceiling of three cents on any possible rise in middle distillate prices regardless of domestic supply/demand conditions. However, FEA does not

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* Based on 42 gal/bbl, $1.78 divided by 42 equal 4.0 cents per gallon. This assumes a full and proportional dollar pass-through of the crude oil price increases.

expect this ceiling to be operable because projected market conditions are expected to be such as to keep any potential rise in price well below three cents per gallon.

Different interpretations can be placed on the existence of banked costs for middle distillates. The banks of unrecovered costs that could be passed through under current regulations can be taken as evidence that competitive forces are precluding their pass through and will continue to do so subsequent to exemption from controls. Conversely, the distribution of banked costs among refiners may imply that those refiners without banks are determining current prices. In this case, the implications of decontrol are inconclusive. Regardless of the impact of this factor, FEA finds that any influence exerted by this factor will be outweighed by the impact of market conditions.

The analysis of trends in gross margins indicates that exemption could lead to increases of about 1.0 cent per gallon if market conditions were sufficiently tight to sustain such increases. FEA does not expect such market conditions for reasons set out below.

FEA believes the most important determinant of price behavior after exemption will be the supply/demand balances generated by competition among refiners and distributors under conditions of plentiful refining capacity adequate



supplies of crude oil. FEA finds that competitive forces will be sufficient to preclude any rise in middle distillate prices.

For the reasons set out above, FEA finds that there is no reason to expect any price increase in middle distillates as a consequence of exemption from price and allocation controls. As the analysis in the body of the chapter sets out, however, there are uncertainties surrounding the relative influence of the various factors bearing on future price moves. Some of these factors, such as pressures to restore margins to historic levels to cope with inflation, generate pressures for price increases even though most of the factors appear to generate pressures for price stability or even price decreases.

For example, the analysis of historic gross margin levels would indicate that if all of FEA's findings about projected supply, demand, and competitive pressures are wrong, prices might rise by as much as 1.0 cent per gallon. Accordingly, in the following chapter FEA will set forth its estimate of the economic impacts of a 1.0 cent per gallon rise in middle distillate prices for the purpose of soliciting public comment on its economic impact analysis, even though its finding is that there will, in fact, be no adverse economic impact associated with an exemption of middle distillates from controls.

## CHAPTER V

## IMPACT OF EXEMPTION OF MIDDLE DISTILLATES ON THE ECONOMY

In chapter IV, FEA expressed its conclusion that there would be no increase in middle distillate prices as a consequence of exempting middle distillates from price and allocation regulation.

The EPAA, as amended by the EPCA, requires that FEA express its views as to the potential impacts (if any) of exempting middle distillates from control. These include, where practicable:

- o State and regional impacts (including effects on governmental units).
- o Economic effects on availability of consumer goods and services; the Gross National Product (GNP); competition; small business; and the supply and availability of energy resources for use as fuel or as feedstock for industry.
- o Effects on employment and consumer prices; rate of unemployment, Consumer Price Index, and the implicit price deflator for the Gross National Product.

Since it is FEA's conclusion that there would be no price increases resulting from the exemption of middle distillates from regulation, there would be no adverse effects with respect to the foregoing matters.



### MACROECONOMIC IMPACTS

However, to provide a basis for public comment upon FEA's view that there would be no adverse effects due to exempting middle distillates from regulation, FEA has also evaluated the possible effects which would arise if a hypothetical 1.0 cent increase in middle distillate prices occurred as a result of exempting middle distillates from regulation. FEA believes that this hypothetical case will not only be useful, but will illustrate that even if FEA's opinion, that there will be no price increase resulting from the exemption, is incorrect, the maximum increase of 1.0 cent would not produce significant adverse effects.

The impact on the national economy that could result from exemption of middle distillates in the hypothetical case was evaluated by using FEA energy models and the Data Resources Inc. (DRI) model of the U.S. economy. A base case solution for the economy was constructed incorporating the crude price provisions of the EPCA. This act imposes a $7.66 "ceiling price" on domestic crude oil for February 1976. Effects presented in this section were estimated under the assumption that February 1976 crude oil prices would be increased through 1978 at three-month intervals beginning in March. Prices were assumed to increase at a compound annual rate of

10 percent, 3 percent as a production incentive and 7 percent as an offset to inflation as measured by the GNP price deflator. This procedure for calculating ceiling crude oil prices is consistent with the EPCA. A second solution for the economy was then constructed in which it was assumed that middle distillate prices increased 1.0 cent per gallon above the base case solution starting from the second quarter 1976 through 1978. The difference between the two solutions constitutes the effects of the hypothetical exemption case which assumes a 1.0 cent increase rather than a case in which no change from exemption is predicted.

The base case which assumes no price increases was constructed by first solving FEA energy models to determine values of selected energy variables under base case assumptions. Values for corresponding variables in the DRI-generated solution for the economy were then modified to agree with those generated by the FEA models. These variables are: the wholesale price index for fuels, related products and power; the constant 1967 dollar values of imported crude oil and refined products; and average unit value indexes for imported crude oil and refined products. The DRI model was then solved using these values, to give the base case for the national economy.



The hypothetical middle distillate price increase case was constructed by modifying wholesale price indexes for refined petroleum products in the FEA models so they agree with estimates for those indexes under the assumption of a 1.0 cent price increase for middle distillates. The FEA models were then re-solved. Values generated for the relevant energy variables were then incorporated as revised assumptions to the DRI model base case. A new solution for the economy was generated and compared to that for the base case to determine the effects of the 1.0 cent price increase.

Results

The effects on the economy (assuming the 1.0 cent price increase in the hypothetical case) would be quite small and result from effects of slightly higher middle distillate prices. The magnitudes of these effects on selected variables are shown in Table XXXIV.

After removing controls, average energy prices would in the hypothetical exceed those of the base case by about 0.4 percent for each of the years 1976-1978. Effects of these changes on the Consumer Price Index (CPI) would be small and no significant changes would occur in the CPI until 1978. In 1978, the CPI would be only 0.1 percent higher than in the base case.



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## TABLE XXXIV

## MACROECONOMIC EFFECTS OF A 1-CENT PER GALLON PRISE RISE OF MIDDLE DISTILLATE OIL (1-cent per gallon price case minus the base case)

| | Quarter | | | | | | | | | | | Annual | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1977:2 | 1977:3 | 1977:4 | 1978:1 | 1978:2 | 1978:3 | 1978:4 | 1979:1 | 1979:2 | 1979:3 | 1979:4 | 1976 | 1977 | 1978 |
| 1. Real GNP Billions of 1958 Dollars at Annual Rates a/ | -0.1 (0.0) | -0.1 (0.0) | -0.2 (0.0) | -0.4 (0.0) | -0.5 (-0.1) | -0.7 (-0.1) | -0.7 (-0.1) | -0.7 (-0.1) | -0.7 (-0.1) | -0.6 (-0.1) | -0.2 (0.0) | -0.1 (0.0) | -0.6 (-0.1) | -0.5 (-0.1) |
| 2. Nominal GNP in Billions Dollars at Annual Rate, a/ | -0.2 (0.0) | 0.0 (0.0) | 0.2 (0.0) | 0.1 (0.0) | -0.1 (0.0) | -0.2 (0.0) | -0.2 (0.0) | -0.1 (0.0) | -0.1 (0.0) | 0.2 (0.0) | 0.8 (0.0) | 0.2 (0.0) | -0.1 (0.0) | 0.2 (0.0) |
| 3. Unemployment in Hundreds of Thousands | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Unemployment Rate in Percentage Points | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. GNP Implicit Price Deflator b/ | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 6. Consumer Price Index b/ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0.1 |
| 7. Wholesale Price Index b/ | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| 8. Wholesale Price Index for Fuels and Related Products and Power b/ | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 |

a/ Percent differences in parentheses.
b/ Percentage difference between 1-cent per gallon price rise case and the base case.

Possible changes in monetary and fiscal policy to offset effects of higher middle distillate prices on the real economy were not incorporated into the exemption simulation for the hypothetical case. Real GNP therefore would decrease 0.1 percent by 1978 (in constant 1958 dollars this would be a reduction of 0.5 billion). No significant changes for unemployment were forecast for any year relative to the base case.

## REGIONAL INCOME EFFECTS

This section considers disparities in regional impacts resulting from the hypothetical 1-cent price increase for middle distillates. Impacts were measured in terms of real personal income and by census region. They were determined by comparing projected income levels for the base case and the impact case.

### Methodology

Real personal income for each state was derived by using the Data Resources Inc. State and Area Forecasting System (SAFS). In this model, personal income for each state is a function of aggregate U.S. personal income, a mix of GNP components of particular relevance to each state and other unique measures of long-run structural changes. Income for the census regions was derived by summing appropriate incomes. Output from the Data Resources Inc. macroeconomic model acts as input into SAFS.



### Results

Differences in regional income levels for the two cases are shown in Table XXXV. Impacts across regions and throughout the time frame would be small and the percentage differences would not be significant. The relatively greater impact on income in the East North Central region is attributable in large part to lower earnings for Michigan. A slightly lower national income inherently would result in lower demand for automobiles nationwide, which in turn would affect the economy in a very select way, because automobile manufacturing is highly concentrated in this region.

In brief, results show that real personal income levels in the 9 census regions would be lowered only slightly by the 1-cent price increase and there would be little interregional variation of the impacts.

## INDUSTRIAL EMPLOYMENT EFFECTS

Estimated components of final demand for 19 categories of Personal Consumption Expenditures, Gross Private Domestic Fixed Investment, Business Inventories, Imports, Exports, Federal Defense Expenditures, Federal Non-Defense Expenditures, and State and Local Government Expenditures were applied to the input-output bridge program to generate total final demand by input-output classification industry. Given two scenarios, a base case and the 1-cent price increase of the hypothetical case, employment requirements were estimated for 1976, 1977, and 1978. There would be no

TABLE XXXV

IMPACT OF A 1-CENT PER GALLON MIDDLE DISTILLATE PRICE INCREASE ON REAL PERSONAL INCOME BY CENSUS REGION

(Impact Case Minus Base Case. Billions of 1958 Dollars)

| Region | 1976 | 1977 | 1978 |
|---|---|---|---|
| New England | | | |
| Difference | - $0.002 | - $0.012 | - $0.010 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| Middle Atlantic | | | |
| Difference | - 0.006 | - 0.027 | - 0.022 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| South Atlantic | | | |
| Difference | - 0.006 | - 0.027 | - 0.024 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| East North Central | | | |
| Difference | - 0.009 | - 0.061 | - 0.079 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| East South Central | | | |
| Difference | - 0.005 | - 0.016 | - 0.011 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| West North Central | | | |
| Difference | - 0.017 | - 0.033 | - 0.027 |
| Percent difference | - 0.0 | - 0.1 | - 0.0 |
| West South Central | | | |
| Difference | - 0.001 | - 0.010 | - 0.013 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| Mountain | | | |
| Difference | - 0.003 | - 0.008 | - 0.002 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| Pacific | | | |
| Difference | - 0.008 | - 0.036 | - 0.030 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |
| U.S. Total | | | |
| Difference | - 0.056 | - 0.230 | - 0.218 |
| Percent difference | - 0.0 | - 0.0 | - 0.0 |



significant employment changes in the 129 industries covered by the input-output model. GNP components would be virtually identical for the two scenarios and would not generate a change in total final demands by input-output sectors. Thus industrial employment changes would be expected to be close to zero.

SOCIOECONOMIC EFFECTS

Methodology

There would be direct and indirect effects of a 1.0 cent per gallon increase in the price of middle distillates in the hypothetical case. Direct effects on the consumer would result primarily from the increased price for heating oil, the major component of middle distillates. Indirect effects would consist of increased prices for consumer products which use middle distillates as one of the inputs in the production process.

Direct effects were estimated by means of the FEA Household Energy Expenditure Model. This model was used to estimate consumer expenditures for heating oil in 1978 with and without the hypothetical 1.0 cent per gallon increase in the price of heating oil. Comparisons of these expenditures were then made to estimate the impact that the price rise might have on various income and socioeconomic groups.

Results

As can be seen from Table XXXVI, household expenditures for heating oil would increase moderately through 1978 in the hypothetical case. As would be expected, these increased expenditures, as a percentage of income, would be greater for lower income groups than for higher income groups since consumption of heating oil does not increase proportionately with income. Thus, while the absolute dollar amount rises from about $14 per year for the highest, the impact measured as a percentage of income declines. Race of household heads, age of household heads, and urban versus rural location would make little difference with respect to the relative impacts of increased energy expenditures.

Thus, even though household energy expenditures would be forecast to increase, expected increases as percentages of income would be so small that total impacts would be negligible. Finally, to the extent that the price increase is below 1.0 cent per gallon, these small impacts would be reduced accordingly.

SUMMARY AND CONCLUSIONS

Economic effects of a 1-cent price increase for middle distillates are very small. Effects on consumer prices are not significant until 1978, when the CPI is forecast to be about 0.1 percent higher with decontrol.



TABLE XXXVI

IMPACT ON EXPENDITURES OF HOUSEHOLDS WHICH USE HEATING OIL OF A 1-CENT PER GALLON INCREASE IN THE PRICE OF MIDDLE DISTILLATE OIL

| | INCREASED EXPENDITURES HEATING OIL | TOTAL AS A PERCENT OF INCOME |
|---|---|---|
| NATIONAL AVERAGE | $16.16 | na |
| INCOME: | | |
| Under $1000 | 13.55 | na |
| $1000 - $4999 | 14.22 | 0.47% |
| $5000 - $9999 | 15.46 | 0.21% |
| $10,000 - $14,999 | 16.66 | 0.13% |
| $15,000 - $19,999 | 18.31 | 0.10% |
| $20,000 - $24,999 | 19.30 | 0.09% |
| $25,000 & over | 20.64 | na |
| RACE OF HOUSEHOLD HEAD: | | |
| White | 16.27 | na |
| Black | 15.07 | na |
| Other Non-white | 15.23 | na |
| AGE OF HOUSEHOLD HEAD: | | |
| Under 65 | 16.33 | na |
| 65 and over | 15.55 | na |
| LOCATION: | | |
| Urban | 16.77 | na |
| Rural | 14.59 | na |

SOURCE: Federal Energy Administration, Household Energy Expenditure Model

NOTE: The statistics in this table are for the 20 million households which use heating oil. There are approximately 51 million households which do not use heating oil. The national average annual increase for all household, including those which do not use heating oil, would be approximately $4.62.

Real output of the economy, as measured by real GNP, is projected to be about one-tenth of one percent lower by 1973, and unemployment changes are insignificant.

Regional impacts are similar to national impacts with a very minor exception in the East North Central Region. In this region the impacts are associated with the manufacture of automobiles. Industry employment impacts are expected to be insignificant with a zero percentage change through 1978.



# CHAPTER VI

# FINDINGS AND CONCLUSIONS

## INTRODUCTION

This chapter states FEA's findings and views concerning the possible exemption of middle distillates from the Mandatory Allocation and Price Regulations. Section 12 of the Emergency Petroleum Allocation Act of 1973 (EPAA), which was added by the Energy Policy and Conservation Act (EPCA), requires that FEA make certain findings and express its views on a variety of matters in proposing that a product be exempted from regulation.

FEA's findings and views expressed in this chapter are drawn from the combined analyses of Chapters III, IV and V. The following pages will make the findings and express FEA's views related to each of these subjects previously discussed. The findings and views are grouped under five general headings: (1) findings related to supply and demand, (2) findings related to price, (3) findings that exempting middle distillates from regulation will be consistent with the attainment of the objectives of the EPAA, (4) FEA's views on a variety of potential impacts that must accompany any proposed exemption submitted

to Congress, including state and regional impacts; and (5) FEA's views related to the effects of exempting middle distillates from price regulation upon employment, the Consumer Price Index, and the Gross National Product.

(1) Findings Related to Supply and Demand

In proposing exemption of any oil or refined product from the regulations, the Federal Energy Administration (FEA) must find "...that such oil or refined product category is no longer in short supply..." [Section 12 (d)(1)(A) of the EPAA]. Chapters III and IV explain FEA's examination of the supply/demand situation of the various products grouped as middle distillates. From this review, FEA finds that middle distillates are no longer in short supply and that anticipated supplies of these products will be sufficient to meet the demand over the near term. Stock of middle distillates have recovered from the low levels of 1972 and 1973, and appear to be sufficient to meet demand surges.



The total supply of middle distillates will be adequate over the 1976-1978 period, and exemption should not result in shortages of middle distillates and other products. With projected expansions, domestic refinery capacity is projected to be more than adequate to meet demand. Sufficient supplies of foreign crude oil should be available, and the entitlements program will ensure the availability of equitably priced crude to all domestic refiners. An analysis of the refinery yields required to meet middle distillates demand demonstrates that domestic refineries have the flexibility to satisfy the demand for all refined products.

Any proposed exemption must also be accompanied by a finding "...that exempting such oil or refined product category will not have an adverse impact on the supply of any other oil or refined petroleum product subject to the Act..." [Section 12(d)(1)(A) of the EPAA]. With domestic refining capacity utilization at an estimated 85.7 percent in 1975 (compared with the pre-embargo average of nearly 90 percent), ample capacity exists to meet the demand for all refined products, including middle distillates. Consequently, FEA finds that exempting middle distillates would not have any adverse impact on the supply of other products.

The analysis of historical supply and demand in Chapter III, and the supply and demand forecast through 1978 in Chapter IV, fully support FEA's finding that all middle distillates are now and will continue to be in adequate supply to meet current and projected demand.

(2) Findings Related To Price

In proposed an exemption from regulation, the FEA must find "...that competition and market forces are adequate to protect consumers..." [Section 12(d)(1)(B) of the EPAA]. Middle distillates prices will increase as crude costs and other costs increase. The removal of controls (under which cost increases are presently being passed through to consumers) would have no effect on these price movements. Supply and demand are in balance and are expected to remain in balance. The industry currently has achieved generally adequate levels of profitability, which factor, combined with competition, should continue exerting downward pressure on prices. FEA finds, therefore, that competition and market forces are adequate to protect consumers if middle distillates are exempted from regulation.



The FEA must also accompany any proposed exemption from the regulations by a finding "...that exempting such oil or refined product category will not result in inequitable prices for any class of users of such oil or product..." [Section 12(d)(1)(B) of the EPAA]. Since no price increases are projected to occur as a result of exemption, and since the market structure analysis in Chapter IV indicates little change in market structure from historical patterns as a result of exemption, FEA finds that exemption would not result in inequitable prices for any class of end-user. The market for most of these products has traditionally been a very competitive one. With supply presently adequate, and the petroleum industry operating at a healthy level of profitability, there does not appear to be a basis for price increases for middle distillates, solely as a result of exemption. Competition in the refining and distribution segments appears to be sufficient to protect both the independent sector of the petroleum industry and consumers. Projected excess refinery capacity should guarantee continued competition in the refining segment of the industry. The large number of independent and small refiners and independent marketers now competing successfully in the middle distillates market indicates that sufficient competition exists to protect consumers.

(3) Findings on Consistency With the Objectives of the EPAA.

The FEA, in presenting any proposed exemption for Congressional review, is required to support such a proposal with a finding that it is "consistent with the attainment of the objectives specified in subsection 4(b)(1)" of the EPAA.

The FEA finds that the exemption of middle distillates from the price and allocation regulations is consistent with the attainment of the objectives set forth in section 4(b)(1) of the EPAA. Since an adequate supply is anticipated, the continued allocation and pricing of middle distillates are not necessary to protect the public health, safety and welfare, and the national defense [Section 4(b)(1)(A)]; the maintenance of all public services [Section 4(b)(1)(B)]; the maintenance of agricultural operations [Section 4(b)(1)(C)]; or the maintenance of exploration for and production or extraction of fuels and minerals [Section 4(b)(1)(G)]. Adequate supply and the positive effects of increased competition insure that the exemption is consistent with the equitable distribution of crude oil, residual fuel oil and refined petroleum products [Section 4(b)(1)(F)] and that the exemption will have no adverse effect on the allocation of suitable crude oil to U.S. refineries [Section 4(b)(1)(E)].



Because the regulations issued pursuant to the EPAA are designed to deal primarly with shortage conditions, the FEA also finds that the exemption is not only consistent with but, in the current period of ample supplies, should actually facilitate the attainment of the objectives of preservation of an economically sound petroleum industry [Section 4(b)(1)(D)]; economic efficiency [Section 4(b)(1)(H)]; and minimization of economic distortions, inflexibility, and interference with market mechanisms [Section 4(b)(1)(I)].

(4) FEA's Views Related To Potential Economic Impacts

Any proposed exemption from either price or allocation regulations must be accompanied by "...a statement of the FEA's views as to the potential impacts (if any) of such (exemption) amendment.." [Section 12(d)(2)(A)] of the EPAA). This section of the Act further specifies a number of particular views which should be included, if practicable. In this section of the report, the FEA presents its views on such potential impacts, presented in the order in which they are cited in the Act.

Views on the state and regional impacts (including impacts on governmental units). Because no supply, demand or price impacts are anticipated as a result of the proposed exemption, no state or regional impacts are anticipated. In particular, no impact is expected on any governmental units. In fact, the FEA would anticipate that exemption would benefit

most governmental units which purchase middle distillates and which have been restrained in their use of competitive bidding under FEA regulations.

Views on the effects on the availability of consumer goods and services. Assessing the potential impacts on the availability of consumer goods and services as a result of exempting middle distillates from regulation involves consideration of three major uses of these products: (1) use of fuel oil for space heating; (2) fuel for diesel application; and (3) fuel for industrial application. Since supplies of middle distillates have been determined in Chapters III and IV to be adequate to meet both present demand and demand over the 1976-1978 period, it is FEA's view that exemption would have no adverse impact on the availability of consumer goods and services.

Views on the effects on the Gross National Product. Because no price increase in middle distillates is projected as a result of the proposed exemption, FEA's judgment is that there would be no adverse effects on the Gross National Product (GNP).

Views on the effects on competition. In Chapter IV the market structure for middle distillates, was examined and FEA concludes that exemption of middle distillates from regulation would not adversely affect the competitive



viability of independent refiners and marketers. Further, to the extent that purchasers would be able to use competitive bidding, competition would be generally enhanced.

Views on the effects on small business. Marketing of middle distillates is not expected to change from present patterns, as determined in Chapter IV, nor is there any projected change in supply, demand, or price as a result of exemption. The exemption, therefore, would not adversely affect small business. Independent branded and nonbranded marketers increased their market share of middle distillates sales from 54 percent in 1972 to approximately 58 percent in 1975. These trends indicate the continued viability of the independent marketer.

Views on the effect on the supply and availability of energy resources for use as fuel or as feedstock for industry. Chapters III and IV examined the supply availability of middle distillates and demonstrated that supplies are adequate to meet present and anticipated demand for the period 1976-1978. This supply situation is not likely to change as a result of exemption, and, therefore, the fuel and feedstock needs of industry would continue to be met following exemption.

Views on the effects on employment and consumer prices As explained in Chapter V, no change as a result of exemption is expected in employment and consumer prices as measured on the national level by the U.S. unemployment rate and the CPI, respectively.

(5) Views on Unemployment, Consumer Price Index, and Gross National Product

In the case of a orooosed exemption from price regulations, the FEA must analyze the effects of such exemption on "...the rate of unemployment for the United States, the Consumer Price Index for the United States, and the implicit price deflator for the Gross National Product..." [Section 12(d)(2)(B) of the EPAA].

As explained in Chapter V, the exemption of middle distillates would have no effect on the rate of unemployment, the CPI and the implicit GNP price deflator. It was established in Chapters III and IV that the exemption of middle distillates from regulation would not have any adverse impact on the supply, demand and price of these products. Moreover, as was concluded in Chapter IV, the market structure and this market atmosphere should further contribute to economic stability. In the refining segment, the market share of large indeoendents and small refiners increased slightly from 1972 to 1975. Furthermore, the Entitlements Program, together with the Buy/Sell Program ensures all refiners equal access to competitively priced crude oil.

APPENDIX J

Definition of Middle Distillates Exempted from Mandatory Price and Allocation Controls (10 CFR 212.31)

Kerosene: - All refined petroleum distillate suitable for use as an illuminant when burned in a wicklamp.

No. 1 Heating Oil: - Heating oil grade No. 1 as defined in American Society for Testing and Materials (ASTM) D 396-71.

No. 2 Heating Oil: - Heating oil grade No. 2 as defined in ASTM D 396-71.

No. 1-D Diesel Fuel: - Diesel fuel grade No. 1 as defined in ASTM D 975-71.

No. 2-D Diesel Fuel: - Diesel fuel grade No. 2 as defined in ASTM D 396-71.

## APPENDIX II

## OVERVIEW OF THE SHORT-TERM PETROLEUM FORECASTING PROCEDURE

The procedure by which FEA's short-term petroleum forecasts are generated may be summarized as follows:

(1) First, a number of macroeconomic variables (such as disposable income or industrial productivity) which can be strongly related to the demand for petroleum products are estimated via an econometric model of the U.S. economy.

(2) Second. price trajectories are estimated for the pertinent petroleum products. Petroleum product prices are estimated by making a variety of assumptions about future changes in those factors which influence domestic prices. These factors would include, among others, the world price of crude, the existence of import fees, the rate at which domestic oil is decontrolled. etc. For the purpose of decontrol analysis, two price impacts were assumed: (1) no price change due to decontrol, (2) prices rise 0-1 cent per gallon due to decontrol.

(3) Next, these macroeconomic and price variables are utilized (along with other variables) in a series of regression equations, one for each product, which estimate the demand for that product



(4) These regression forecasts are then adjusted for anticipated natural gas curtailments or other unusual factors, wherever appropriate.

### Econometric Demand Model

FEA's short-term petroleum demand model is driven by a macroeconomic model developed by Data Resources, Inc., (DRI).

The DRI macroeconomic model is a large-scale structural model embodying GNP and industry models. Applied to a data base constructed primarily from the Federal statistical system, the DRI macroeconomic model is used to forecast the following variables, which are subsequently treated as inputs to the FEA petroleum model:

(1) disposable personal income (1958 dollars, seasonally-adjusted at annual rates);

(2) personal consumption expenditures (1958 dollars, seasonally-adjusted at annual rates);

(3) gross national product (1958 dollars. seasonally-adjusted at annual rates);

(4) Federal Reserve Board index of production for chemicals and chemical products (base: 1967 = 1.0, seasonally-adjusted);

(5) Federal Reserve Board index of production for electric utilities (base: 1967 = 1.0, seasonally-adjusted).

FEA's petroleum demand model is comprised of a set of regression equations. Using historical data, a regression equation was constructed for each petroleum product. Each equation attempts to capture the relationship between final demand for that product and the relevant factors influencing that demand. The explanatory factors used in predicting product demand included: (a) macroeconomic variables, such as those listed above, (b) real product prices, (c) variables representing the effects of weather and monthly (seasonal) variations in demand and (d) other factors relevant to a particular product.

Current Demand Forecast

The assumptions which underlie this short-term petroleum demand forecast are as follows:

Macroeconomic

The current base case utilizes macroeconomic variables as projected by Data Resources Inc.'s (DRI) Cycle Long 12/75 forecast. Real GNP growth underlying this stimulation is as follows:

GNP58
COMPOUND ANNUAL RATES OF GROWTH (%)

| | | FROM | | |
|---|---|---|---|---|
| TO | | 75 | 76 | 77 |
| 75 | 797.4 | | | |
| 76 | 849.6 | 6.5 | | |
| 77 | 899.6 | 6.2 | 5.9 | |
| 78 | 910.6 | 4.5 | 3.5 | 1.2 |



Price

(a) The $2 crude import fee is lifted as of January 1, 1976.

(b) OPEC-determined world crude prices stay constant in real terms from April 1976 through the end of 1978. It is assumed that this continuous, nominal growth in world crude prices will roughly correspond to series of anticipated step price increases initiated by OPEC over the course of the next few years.

(c) The price controls embodied in the Energy Policy and Conservation Act of 1975 (EPCA) are assumed to go into effect starting on February 1, 1976. Specifically, the weighted composite, first sale transaction price for domestically-produced crude oil is set at $7.66 per barrel in February 1976 and increases 10 percent per annum (compounded) thereafter.

(d) Alaskan oil, assumed to come on stream in January of 1978, is excluded from the EPCA-mandated ceiling price composite and is set at the lesser of the following two prices: (1) the upper tier (i.e., new oil) price as specified by EPCA regulations, plus an assumed Alaskan-to-continental U.S. transportation charge of $4/barrel, or (2) the crude import price in effect at that time.

Other

(a) Natural gas curtailments are assumed throughout the entire forecast interval. On a yearly average basis, it is assumed that incremental gas curtailments will boost residual demand by 80 thousand barrels per day and will boost distillate demand by 113 thousand barrels per day.

(b) Since Bureau of Mines (BOM) demand data is currently available only through August 1975, the demand model solves from September 1975 through December 1978. Since quarterly BOM supply data is available only through the second quarter of 1975, the supply model solves from July 1975 through December 1978.



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